Diamond Jubilee Year

1961 - 2021

Tirumala Tirupati Devasthanams

Sri Venkateswara College

(University of Delhi)

Sri Venkateswara College

Research Magazine

VenQuest

Genesis

2021-2022

Diamond Jubilee Year
1961 - 2021

శ్రీ వేంకటేశ్వర కళాశాల
Sri Venkateswara College
(University of Delhi)
NAAC 'A' Accredited

Prof. C. Sheela Reddy
Principal

From Principal's desk

I am elated to know that the Research Council of our college is releasing the first edition of its Annual Magazine 'Venquest'. The Magazine is a compilation of ginormous research work conducted by faculty members cutting across disciplines. Venquest represents the collective cogitation of our committed faculty members. The diverse areas of research showcased in it range from theoretical and applied scientific concepts such as Nanotechnology, Bioinformatics, Mathematical Modelling, Environment and Climate Change, Cancer and Public Health to name a few. I am glad to note the varied representation of contemporary topics such as Green Human Resource Management and Finance. The research and academic work conducted by faculty members is a testimony to the spirit of inclusivity in the college. The research conducted by faculty members is not restricted to laboratories and library, rather it has gone into the society and also touches upon pertinent social issues such as Education and State, Role of Social Media and Aspirations of the Youth.

I am particularly enthralled to know about the research interests and achievements of our budding researchers, who I am sure are going to make a big impact in their respective domains in the years to come.

I congratulate the research council and the editorial team for this much needed and thoughtful endeavor.

C. Sheela Reddy
PRINCIPAL

1961 - 2021
Tirumala Tirupati Devasthanams
Sri Venkateswara College
(University of Delhi)

Message from Convener

I am delighted to announce the release of the first edition of Sri Venkateswara College's research magazine 'VenQuest', an initiative by the College Research Committee and research scholars. VenQuest is a reflection of the efforts that faculty members of the college put in to conduct world class research along with undergraduate teaching. The title 'VenQuest' itself embodies the spirit of 'quest' that is to unravel the unknown, practiced in spirit and action by the faculty and enthusiastic research scholars of the College. This first edition is dedicated to the faculty members of the college and is a compilation of research efforts put in by them in diverse fields. The magazine represents their research accomplishments in the form of research grants, publications and awards. A special section has been dedicated to highlight the achievements of young research scholars of the college.

VenQuest aims to focus on a particular theme every year, highlighting research work, latest updates and thoughts of faculty and research students. The theme of this year, and rightly so, is 'Genesis'. While the world is still in the process of recovering from Covid pandemic, this period has marked a new era for research. Last two years of pandemic has seen not just innovative pedagogy but also a marked increase in research papers. We witnessed new insights, not just into medical and allied research, but also in plethora of fields such as environmental science, economics, sociology, electronics, data science, chemistry, commerce and marketing. In a way, this is the genesis of a new age for innovative interdisciplinary research and innovations.

I thank the editorial team for their hard work and efforts and sincerely hope that VenQuest continues to proudly showcase the research work of our College faculty year after year.

Prof. Vartika Mathur

Convener, College Research Committee

College Research Council

Prof. C. Sheela Reddy	Chairperson
Prof. Vartika Mathur	Convener CRC & IQAC Co-Ordinator
Prof. Nirmal Kumar	Member
Prof. N. Latha	Member
Prof. K. C. Singh	Member
Dr. Ravindra Varma Polisetty	Member

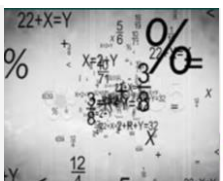
Editorial Team

Dr. Pooja Gokhale Sinha
Faculty Editor

Garima Sharma
Student Editor

Content



DBT-BTISNET funded Bioinformatics Centre

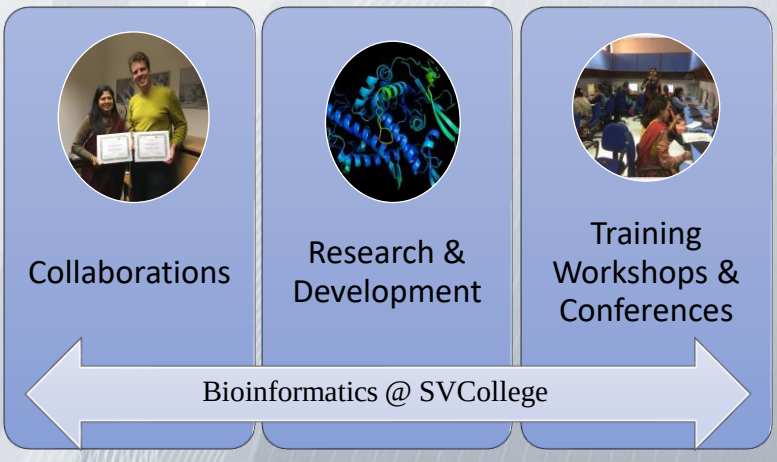
Bioinformatics Infrastructure Facility at Sri Venkateswara College was established in 2007 with an objective to promote teaching of biology teaching through Bioinformatics. This is the first DBT–BTISNET funded Bioinformatics Facility set up at College level under University of Delhi. Apart from providing Bioinformatics training to undergraduate/post graduate students and teachers during workshops/training programs, the center has grown over the years into a dedicated research centre.

Research Areas: Bioinformatics & Computational Biology, Molecular Modeling & Simulation, Network Biology, PPIN, Computer Aided Drug Design (CADD), Immunoinformatics and Biological Data Sciences.

Scope of Work: In silico approaches to understand Disease biology, Identify targets, Understand Phylogeny, Design Therapeutics and In silico Vaccines and Creation of Biological Databases

Collaborations:
National
IP University, Delhi ; National Institute of Malaria Research, Delhi; AIIMS, Delhi; BISR, Jaipur; Department of Genetics, DU; Department of Biochemistry, DU; Department of Chemistry, DU
International
Belarusian University, Minsk, Belarus; University of Salzburg, Salzburg, Austria, Chulalongkorn University, Thailand; Martin Luther University , Halle-Wittenberg, Germany

Conferences/Workshops: 15 (National) and 2 (International)
Course Coordinated: Certificate Program in Bioinformatics & Computational Biology (2020-2021)



Prof. N. Latha
Department of Biochemistry & Coordinator, Bioinformatics Centre Sri Venkateswara College

Teaching Experience: 31 years
Research Experience: 20 years

Publications: over 30

Awards & Honors

- INSA Teachers Award by Indian National Science Academy (2020)
- Excellence award for teachers in service by University of Delhi (2019)
- DBT incentive awards for publications in bioinformatics (2013, 2014, 2015)
- Best paper award in allergen informatics by Indian Academy Of Allergy (2013)

Webpage:

www.bic-svc.ac.in

Dr. Nandita Narayansamy

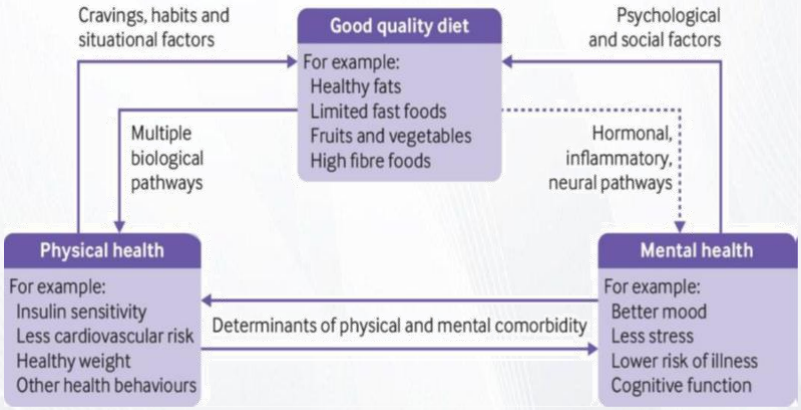
Associate Professor, Department of Biochemistry

Research experience: 11 years
Teaching experience: 33 years
Publications: 12
Awards/Distinctions:

- Awarded the INSA Teacher Award for the year 2016
- Best presentation awarded at International Conference: ENCON 2017

Public Health Biology and Ayurbiology

Dr. Nandita Narayansamy has obtained Ph.D. from Maharaja Sayajirao Gaekwad University, Vadodara, India in 1996. Her research focuses on trans-disciplinary approach, blending Biochemistry, Nutrition and Traditional knowledge systems to understand and arrive at preventive measures for contemporary public health problems associated with lifestyle. Current work on Ayurvedic drugs aims at isolating new chemical entities which are poly-herbal drug formulations. Further these formulations are customized with respect to dosage and combination to suit a patient, making the therapy highly personalized.



My work aims at preparing ayurvedic formulations according to SOPs of ayurvedic pharmacopoeia and test for in-vitro absorption patterns of identified molecules. Target molecules are evaluated for their anti-bacterial, anti-apoptotic, antioxidative and anti-inflammatory properties.

Publications in 2021:

1. Feline fables: book review of “Leopard Diaries: Rosette in India” by Sanjay Gubbi; Nandita Narayanasamy. (2021) the book review, VOLUME XLV, NUMBER 7 July 2021, pp36-37 ISSN: 0970-4175.

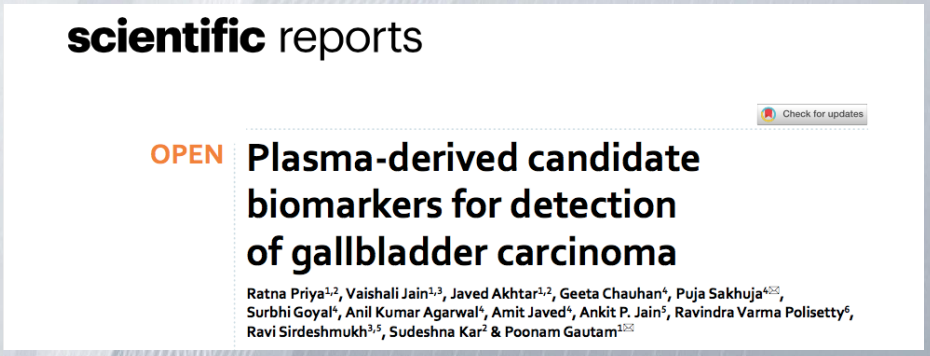
Cancer and Metabolomics Research

Dr. Ravindra Varma Polisetty's research focuses on studying novel disease proteins and signaling pathways by employing systems biology approaches. Omics approaches generate a larger datasets of various biomolecules and identifying the disease specific proteins and pathways is a challenge. He uses transcriptomic, proteomic and metabolomic datasets, to understand the patterns and identify the important disease specific genes/proteins/metabolites.

He has extensively studied microsomal membrane fractions derived from low and high grade tumor clinical samples by employing iTRAQ quantitative proteomics approach. He has also studied nuclear proteomes of glioma to identify novel oncogenic proteins that have potential role in cancer progression. These proteins include transcription factors with tumorigenic potential and are currently under investigation as therapeutic targets. Further, he has generated a two dimensional molecular maps with regulatory and functional linkages by integrating the microRNA, mRNA and protein datasets to understand the molecular mechanisms associated with glioblastoma tumor cell migration and proliferation.

In Gall bladder cancer, he carried out quantitative proteomic analysis of the extracellular vesicle proteins. Reliable and affordable biomarker-based assays with high sensitivity and specificity were identified for the detection of this cancer. This work was done in collaboration with Institute of Pathology, ICMR.

At present, he is working on tumor microRNAs and their targets identification by proteomics approach in glioblastoma cell lines. MicroRNA-137 with tumor suppressor activity was transiently expressed in GBM cell lines and samples were analyzed to identify novel targets with potential applications in cancer therapy. This work was done under early career research grant scheme funded by DST-SERB.


scientific reports

Check for updates

OPEN

Plasma-derived candidate biomarkers for detection of gallbladder carcinoma

Ratna Priya[1,2], Vaishali Jain[1,3], Javed Akhtar[1,2], Geeta Chauhan[4], Puja Sakhuja[4✉], Surbhi Goyal[4], Anil Kumar Agarwal[4], Amit Javed[4], Ankit P. Jain[5], Ravindra Varma Polisetty[6], Ravi Sirdeshmukh[3,5], Sudeshna Kar[2] & Poonam Gautam[1✉]

Dr. Ravindra Varma Polisetty

Assistant Professor, Department of Biochemistry

Research experience: 9 years
Teaching experience: 7 years
Publications: 12
H-index: 7

Award

• Selected for the Faculty Development Program at the University of Nottingham, UK,

Dr. Vandana Malhotra

Assistant Professor, Department of Biochemistry

Research experience: 18 years
Teaching experience: 18 years

Publications: 15

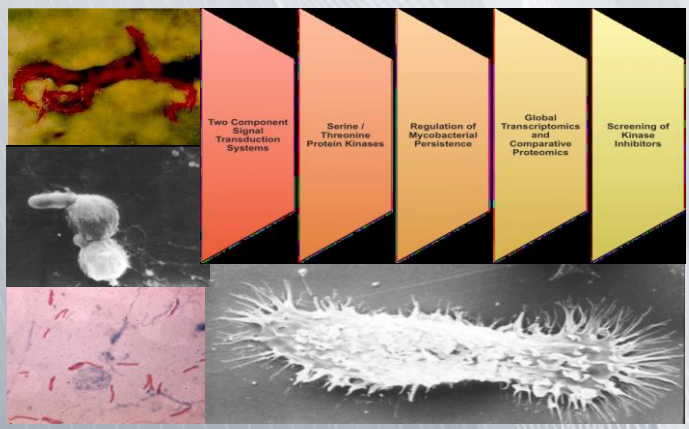
H-index: 11

Awards:
Best Poster Prize (Innovative Research Idea Category) as a Mentor at the International e-conference on "Health & Research in Current Scenario: With special emphasis on COVID-19 Virus Genomics & Pathogenicity" held on July 17, 2020
• Best Poster Prize at the ISW-2020 (International Summit on Women in STEM- "Visualizing the future: New Skylines) held on January 23-24, 2020 at India Habitat Center, New Delhi.

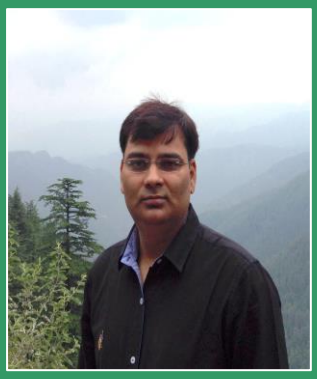
Mycobacterium tuberculosis Laboratory

Like most bacteria, *Mycobacterium tuberculosis* depends on signal transduction systems for transcriptional reprogramming and survival in response to changing *in-vivo* environments. Annotation of the *M. tuberculosis* genome revealed the presence of more than 200 genes involved in cellular communication and information processing with two component systems (TCSs) and "eukaryotic-like" serine/threonine protein kinases (STPKs) as two major contributors. Understanding how *M. tuberculosis* signal transduction systems interact and cross-interact to coordinate complex growth, metabolic adaptation, and physiological responses is critical to elucidating the events that govern establishment and progression of tuberculosis disease.

Given our current knowledge and data obtained from my studies, my hypothesis is that *M. tuberculosis* processes and responds to cellular inputs by controlling signaling events that proceed through linear pathways, modular networks, and multi-dimensional node-based transduction communication. My lab works on deciphering the underlying mechanisms that drive these networks leading to mycobacterial persistence and dormancy. We use high throughput transcriptomic and proteomic approaches to dissect the signaling networks that govern these adaptations with the ultimate goal of identifying novel drug targets for the design of newer therapeutic interventions. In the last academic year, we have published 4 research papers in journals of repute.



Microbial endosymbiosis; and Molecular Profiling and Pharmacognosy of Important Plants



Dr. Amit Vashishtha

Assistant Professor,
Department of Botany

Research experience: 14 Years
Teaching experience: 13 Years
Publications: 16
H-index: 7

Dr. Amit Vashishtha's research interest lies on the margins of Plant Sciences and Biotechnology. One of his research focus is on molecular identification, phylogeny and roles of endosymbionts among various pest insects on crop plants. Endosymbiosis is ubiquitous among organisms such as nitrogen fixing bacteria in root nodules of leguminous plants, microalgae inside the coral reefs and microbes inside the insects. These microbial endosymbionts in insects are unculturable and show obligate e.g. *Buchnera* sp. and facultative e.g. *Wolbachia* sp. habits. Their mode of transmission can be vertical or horizontal. The outcome of his studies on microbial endosymbionts could be useful in future pest control mechanisms and would give some substantial new insights concerning the genetics and evolution of the endosymbionts.

another area of his research is exploring Pharmacognosy and ethnobotanical facets and applications of medicinal and aromatic plants. In the recent past, I have published some review and research articles in this area that have attracted good citations among the scientific community.

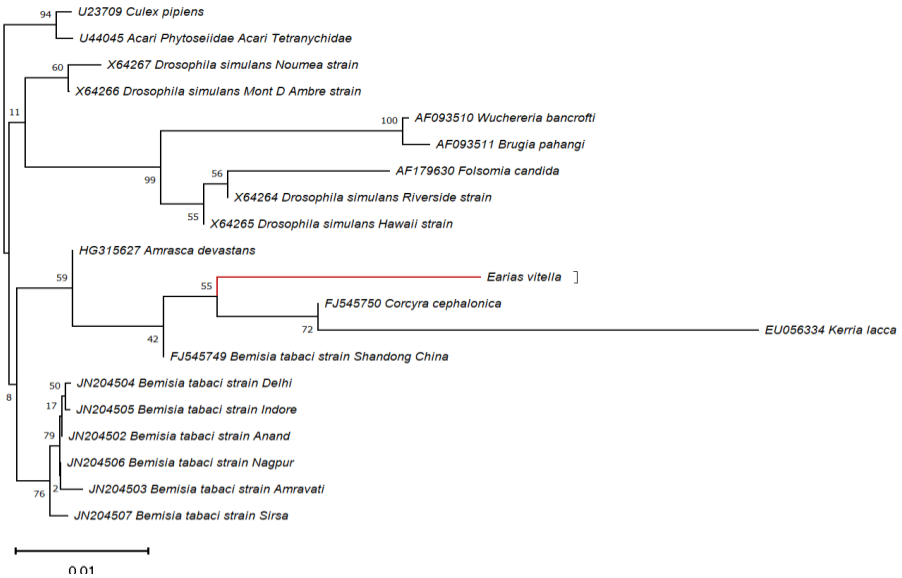


Fig. Phylogenetic tree derived from a consensus sequence of four clones of 16S rDNA of *Wolbachia* of *Earias vittella* and *Wolbachia* strains from other hosts (sequence derived from NCBI gene bank) by MEGA 11 using neighbor-joining method.

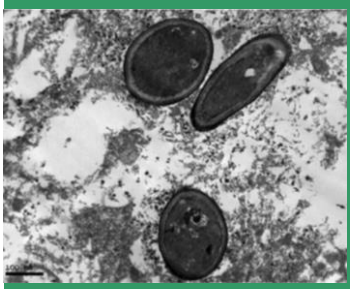


Fig. Yeast like symbionts in *Kerria lacca*

Dr. Pooja Gokhale Sinha

Assistant Professor,
Department of Botany

Research experience: 17 years
Teaching experience: 13 Years

Publications: 14

H-index: 3

Awards/Distinctions

- Best Electron Micrograph Award in Biological Sciences in the National Conference on Electron Microscopy and Allied Fields.
- Best Oral Presentation Award in National conference on Emerging Environmental Challenges and Sustainable Development organized by Society for environment and Development, 2018.

Crop Response to Climate Change

Dr. Pooja completed her Ph. D. in Botany from the University of Delhi in 2011. She worked on understanding the effect of elevated CO_2 concentration on growth, phenology, ultrastructure and quality of grain in three species of Wheat belonging to different ploidies. Under this study she has reported the effect of elevated [CO_2] on cell structure and function in seed plants, ultrastructure of pericarp and composition of grain as well as photosynthesis and flowering in wheat species. She has also conducted DU Innovation project to understand temporal dynamics pollution in urban water bodies of Delhi. She has also reported Sector-wise Carbon Footprint Emission Analysis of Urban Youth.

Her current recent research focuses on Crop response to climate change, Field Ecology and Environmental Biology. Currently, she is the Co-Principal Investigator of major research project titled "Microbial Communities in Changing Climatic Regime: Analysis of Primary and Secondary Risk Factors", funded by Ministry of Environment Forests & Climate Change. This work would provide an understanding of response of plants to dual threat of climate change and organic pollutants. She has isolated 8 phenanthrene and fluoranthene degrading bacterial strains and have secured accession numbers for the same.

She is also involved as a Co-PI in a CSR initiative of IGL, under which the effect of Miyawaki reforestation technique in reclamation of degraded land in Delhi is being investigated.

Open Top Chamber Facility established at SVC

Dellaglioa algida strain VMP1 16S ribosomal RNA gene, partial sequence
GenBank: OM780290.1

Bacillus tropicus strain VMP4 16S ribosomal RNA gene, partial sequence
GenBank: OM780291.1

Bacillus licheniformis strain VMF3 16S ribosomal RNA gene, partial sequence
GenBank: OM780292.1

Bacillus sp. (in: Bacteria) strain VMF1 16S ribosomal RNA gene, partial sequence
GenBank: OL872284.1

Bacillus sp. (in: Bacteria) strain VMF2 16S ribosomal RNA gene, partial sequence
GenBank: OL872285.1

REFERENCE 1 (bases 1 to 678)
AUTHORS Mathur,V., Sinha,P.G. and Sharma,G.
TITLE Direct Submission
JOURNAL Submitted (23-FEB-2022) Animal Plant Interactions Lab, Department of Zoology, Sri Venkateswara College, University of Delhi, Benito Juarez Marg, Dhaula Kuan, South Delhi, Delhi (UT) 110021, India

PAH degrading bacterial strains submitted in NCBI

Website: https://apilab.co.in/dr-pooja-gokhale-sinha

Nanomaterials

Research and development of nanomaterials over the past few decades have gained considerable momentum specially to address the global energy and environmental concerns. Thus, the identification of new materials is essential in the area of research involving hydrogen generation, rechargeable batteries, fuel cells, thermoelectric and photocatalytic materials.

Non-renewable sources of energy are not sufficient to meet rapidly increasing energy demands due to excessive increase in population. In this context, studies involving generation of hydrogen by water splitting reactions and photocatalytic dye degradation play a crucial role. Achieving target materials by design, sometimes along with tailoring of certain properties like band gap have been possible by carrying out careful low temperature based topochemical reactions. Oxides are preferred materials from the point of view of ease of handling, ease of synthesis, stability and are cost effective.

Dr. Akansha's current research work deals with the synthesis and characterization of mixed metal oxides based on various synthetic approaches of nanomaterials at ambient temperature and further applications such as water splitting reactions and photocatalytic dyes degradations are investigated. The properties of metal oxides grab the attention of researchers to use them in photocatalytic water splitting reactions for hydrogen generation. Doping experiments using Cerium, Nitrogen and Boron have been attempted in oxides such as SnO_2, TiO_2 etc. for water splitting reactions and photocatalysis for degradation of organic dyes. Extending the research, different metal oxides will be further modified through composite formation or heterojunctions and applications such as pesticide degradation, heavy metal ion removal will be studied.

Open Access | Editor's Choice | Review

Nano-Structured Dilute Magnetic Semiconductors for Efficient Spintronics at Room Temperature

by Akanksha Gupta, Rui Zhang, Pramod Kumar, Vinod Kumar and Anup Kumar

Magnetochemistry 2020, *6*(1), 15; https://doi.org/10.3390/magnetochemistry6010015 - 16 Mar 2020

Cited by 19 | Viewed by 2122

Abstract In recent years, many efforts have been made to develop advanced metal oxide semiconductor nanomaterials with exotic magnetic properties for modern applications w.r.t traditional analogues. Dilute magnetic semiconductor oxides (DMSOs) are promising candidates for superior control over the charge and spin degrees of [...] Read more.

(This article belongs to the Special Issue Applications of Magnetization and Polarization for Molecules and Materials)

- Akanksha Gupta, Sanjay Kumar, Ravinder Kumar, Ashish Kumar Choudhary, Kamlesh Kumari, Prashant Singh, Vinod Kumar
  COVID-19: Emergence of Infectious Diseases, Nanotechnology Aspects, Challenges, and Future Perspectives [Review]
  ChemistrySelect **2020**, vol. 5, no. 25, p. 7521

Dr. Akansha Gupta

Assistant Professor,
Department of Chemistry

Teaching Experience: 5 years
Research Experience: 10 years
Publications: 17
H-index: 9

Dr. Deepti Sharma

Assistant Professor, Department of Chemistry

Research experience: 12 years

Teaching experience: 7 years

Publications: 10

H-index: 6

Synthesis of Biologically Relevant Molecules

Dr. Sharma did her Ph.D. from University of Delhi in the year 2010. She has worked in the area of chemoenzymatic synthesis of carbohydrates and modified nucleoside as well as synthesis of bioactive heterocyclic molecules.

Dr. Sharma worked on chemoenzymatic synthesis of modified nucleosides and developed a simplified chemo-enzymatic route for their diastereo- and regioselective deacylation.

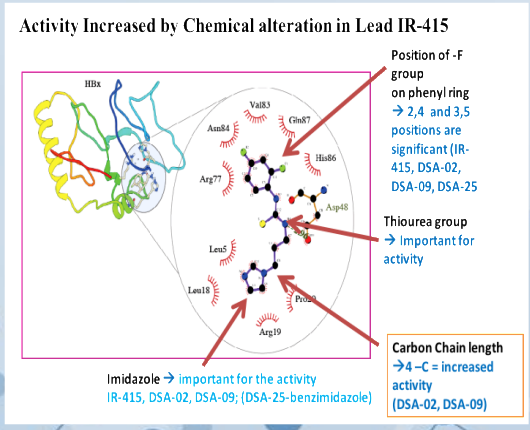
She also developed a series of β-amino alcohols as potential β-blockers and Src-kinases inhibitors and coumariniyldihydropyridines.

After completing her Ph.D. she worked as a Research Associate at the Indian Oil Corporation, R&D and then moved on to a contract research organization Jubiliant Chemsys, Noida as a Research Scientist, before moving to the Centre of Chemical Evolution at the Georgia Institute of Technology, Atlanta, USA as a post-doctoral fellow.

She has 10 research articles published in the national and international journals of repute such as Journal of Organic Chemistry, Molecules, Biochimie, Synthetic Communications, Bioorganic and Medicinal Chemistry Letters to name some.

She received a major DBT grant in collaboration with Institute of Liver and Biliary Sciences for the development of thiourea derivatives as antiviral agents against Hepatitis B virus infection. Her team has synthesized a series of these derivatives which are currently being tested against Hepatitis B viral Infection.

In her recent research, based on the biological activity data she was able to derive the following structure activity relation between the derivatives of the lead compound (IR-415) and its activity against hepatitis B virus protein HBx.



Advanced Nanomaterials for diverse Applications

Prof. Sanjay Kumar

Professor, Department of Chemistry
Research experience: 17
Teaching experience: 25 years
Publications: 17
Chapters: 16
Books: 7
H-index: 7

Dr. Sanjay Kumar has been working as a Professor in the Department of Chemistry, Sri Venkateswara College, and as Research Supervisor for Doctoral students. He did Ph.D. in the field of molecular spectroscopy from the University of Delhi and worked as a post-doctoral fellow at IGIB, New Delhi in the field of molecular immunology. Currently, he is focusing on the field of nanotechnology and cancer research. He has published multiple research papers in prestigious international journals and has written seven books in the fields of chemistry and environmental sciences. His study focuses on gene silencing, gene delivery, detection, and combinatory therapeutics using gold nanoparticles, which are highlighted due to their lethal effects on healthy human cells. He has supervised several undergraduate students who have published in prestigious international journals such as RSC Advances, Anti-Cancer Agents in Medicinal Chemistry, Cancer Treatment, and Research Communications, RSC Medicinal Chemistry, Materials Advances, and contributed chapters to books published by international publishers.

Dr. Sanjay examined the antiplasmodial activity of silver nanoparticles synthesized utilizing phytochemicals and a malarial parasite strain (Plasmodium falciparum, 3D7). In addition, he has published a research paper in the Chem Comm RSC journal on the synthesis and applications of metal-based catalysts.

His research work also covers the development of porous and chelated nanostructured multifunctional materials for metal ion extraction and catalysts for a variety of organic transformations. Several publications with students have been published on this topic, including one in the Journal of Nanostructure in Chemistry, which has an impact factor of 6.39. Based on their publications, students in this discipline have been given the option to work as interns in industries. In addition to experimental work, theoretical studies have also been carried out in his research laboratory using advanced computational softwares. He is also acting as the reviewer of national and international journals.

Dr. Sharda Pasricha

Associate Professor, Department of Chemistry

Research experience: 27 Years

Teaching experience: 25 years

Publications: 10

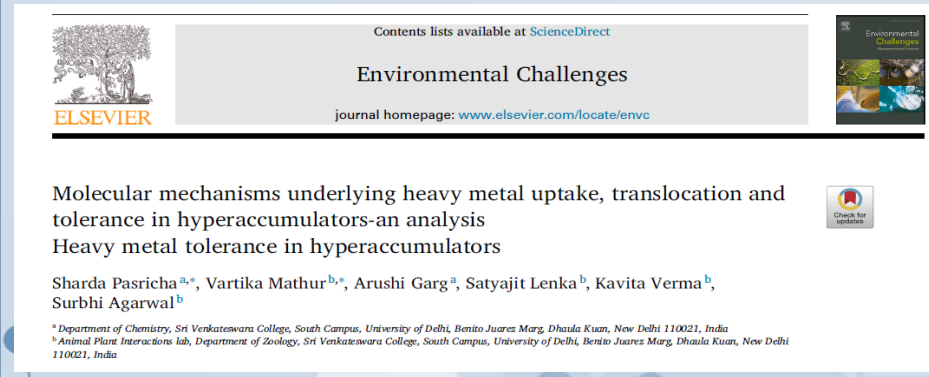
H-index: 4

Natural Product and Green Chemistry

Dr. Sharda Pasricha is working as an Associate Professor in the Department of Chemistry, Sri Venkateswara College (University of Delhi), India. She has nearly 25 years of teaching experience at the undergraduate level. She has published research articles in several national and international journals. She has written two books and several e-modules for undergraduate students. Her research interests include Natural product chemistry, Green chemistry, Medicinal chemistry with a focus on heterocycles, synthesis and the use of heterogeneous catalysts in organic transformations.

She has so far received 4 major and minor grants. Her initial research was on “Asymmetric reductive amination of carbonyl compounds in chiral lonic liquids”. Her recent work involved Aqueous Phase Bromination by Micellar Solution of Sodium Dodecyl Sulfate (SDS). This study presented a fast and environmentally method for the preparation of p-bromoacetanilide from acetanilide. The method can be adopted for the synthesis of commercially important bromo compounds at the undergraduate level.

Her research titled “Targeting Environmental Sustainability in Industrial Waste Water and Soil treatment through Phytoremediation with *Calendula Officinalis*, in Bhiwadi Industrial Area” was funded by University of Delhi. Under this work she has also published an article titled “Molecular mechanisms underlying heavy metal uptake, translocation and tolerance in hyperaccumulators-an analysis: Heavy metal tolerance in hyperaccumulators” in 2021.



Contents lists available at ScienceDirect

Environmental Challenges

journal homepage: www.elsevier.com/locate/envc

ELSEVIER

Molecular mechanisms underlying heavy metal uptake, translocation and tolerance in hyperaccumulators-an analysis
Heavy metal tolerance in hyperaccumulators

Sharda Pasricha[a,*], Vartika Mathur[b,*], Arushi Garg[a], Satyajit Lenka[b], Kavita Verma[b], Surbhi Agarwal[b]

[a] Department of Chemistry, Sri Venkateswara College, South Campus, University of Delhi, Benito Juarez Marg, Dhaula Kuan, New Delhi 110021, India
[b] Animal Plant Interactions lab, Department of Zoology, Sri Venkateswara College, South Campus, University of Delhi, Benito Juarez Marg, Dhaula Kuan, New Delhi 110021, India

Sustainable Multifunctional Nanomaterials for Real-world Applications

Dr. Shikha Gulati

Assistant Professor,
Department of Chemistry

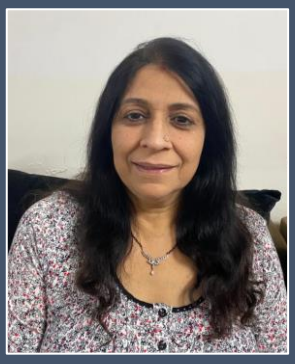
Research experience
8 years
Teaching experience
10 years
Publication: 20
Chapters: 20
Books: 7

H-index: 11

Awards
InSc 2020 Young Researcher Award

Dr. Shikha Gulati is working as an Assistant Professor, in the Department of Chemistry, SVC. She has expertise in Inorganic Chemistry, Nano-materials, Green Chemistry, Catalysis, and Analytical Chemistry. Dr Shikha has authored several research papers in International Journals of repute and written 7 books on Inorganic Chemistry and Green Chemistry (Theory and Practical) as well as chapters in diverse books which attest to her research aptitude, and good writing skills. Her books are referred to in diverse Universities across India for undergraduate and postgraduate courses. Her research interests primarily focus on the fabrication of multifunctional nanomaterials for their applications as metal scavengers, sensors and catalysts.

She has been working on nanomaterials as anticancer agents where she has guided undergraduate students who have several publications to their credit in highly reputed International journals viz RSC Advances, RSC Medicinal Chemistry, Materials Advances, Anti-Cancer Agents in Medicinal Chemistry & Cancer Treatment and Research Communications as well as contributed chapters in books with International publishers (RSC, Springer, Elsevier, Wiley). Dr. Gulati has also been working on the synthesis of Metal-organic frameworks (MOFs) that can be tailored for specific catalytic applications. Due to her expertise in this field of research, she has also been invited as an Editor in 2022 for the Book entitled ‘Metal-organic frameworks (MOFs) as catalysts’ published by Springer, Singapore.



Dr. Mamta Arora

Associate Professor, Department of Commerce
Research experience: 35 years
Teaching experience: 35 years

Dr. Arpita Kaul

Assistant Professor, Department of Commerce

Research experience: 12 years
Teaching experience: 12 years

Green Human Resource Management

Research was carried out on GREEN HUMAN RESOURCE MANAGEMENT: AN EPIRICAL STUDY OF INDIA. The work was published in Visegrad Journal on Bioeconony and Sustainable Development. An exploratory research method was used for this purpose. A detailed literature review was carried out and based on the same, a questionnaire of twenty questions was formulated by the authors. The questionnaire was sent to the human resource professionals of certain companies in India.

The major findings of the study were:

- In the IT/IT services sector, all the companies surveyed in this study follow green training and development, green reward management and green discipline management while in the banking/finance sector, only 25% of the companies do green training and development and green reward management and no company employs green discipline management.
- In the IT/IT services sector, 75% of the organizations included in this study carry out green recruitment, green selection, green induction and green performance appraisal while these green HRM practices are not followed in any of the banking/finance companies.
- Green recruitment, green training and development & green safety and health management are the most prominent green HRM functions being performed by the organizations surveyed here.
- Green acquisition practices are not being adopted by any of the banking/finance sector companies included in the survey.

IT/IT services sector found to be most enthusiastic in terms of adopting the concept of green HRM and the banking/ finance sector being the most reluctant and skeptical.

This study is novel in the Indian context and can be extended to various other sectors like energy, travel and tourism, telecommunication and biotechnology. Industry-specific studies on green HRM can be carried out which can provide key insights into different aspects of green HRM implementation. It would be useful to develop a green HRM index to quantitatively capture various features of green HRM. Future research efforts in this area should focus on extending the study sample to include a more diverse array of companies covering a broader range of activities.

Other researches being carried out are:

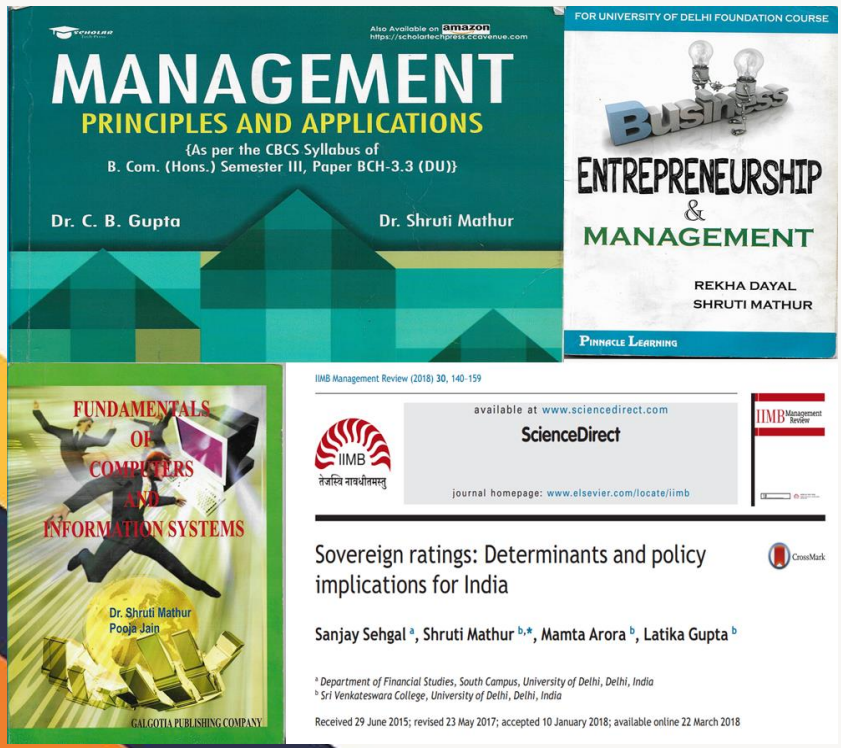
- Digital Payment Apps: An exploratory study of India
- Covid-19 and E-Commerce in India

Finance

Dr. Shruti Mathur, Associate Professor, Department of Commerce, Sri Venkateswara College, has obtained her Ph.D. from Department of Financial Studies, South Campus, University of Delhi. Her broad area of research is finance and she undertook 1 Innovation research project in past which was funded by University of Delhi.

She has written 3 books in the areas of Management Principles and Applications; Fundamentals of Computer, Entrepreneurship and Management. In additions I have contributed 1 book chapter and developed 2 lessons for ILLL.

Currently she is working on 'Financial Contagion In Stock Markets During Covid-19'. The outbreak of COVID–19 has affected the global financial markets. Along with her Ph.D. student, she is exploring the issues such as how financial contagion occurs in stock markets of G20 countries during the COVID–19 period? What has been the stock market reaction to the arrival of COVID-19 in India? What has been the impact of containment measures and stimulus packages on Indian stock market returns? What has been the sector-wise impact of COVID-19 on stock prices in India? We are at the initial stage and are doing systematic literature review (PRISMA Analysis) and bibliometric analysis, to identify research gaps and dry research areas.



Dr. Shruti Mathur
Associate Professor, Department of Commerce

Research experience: 17 years
Teaching experience: 17 years
Publications: 9

Dr. S. Krishnakumar

Associate Professor, Department of Economics

Teaching experience: 22 years

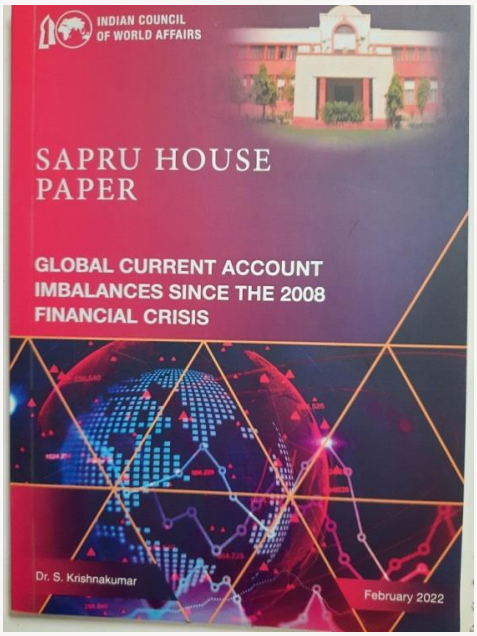
Publications: 5

Global Liquidity and Emerging Economies

The asymmetries of the current international monetary system in the contemporary world economy characterized by untrammeled mobility of capital and its impact of the growth of emerging market and developing economies has been the main focus of my research. This takes forward the work which was done on Bretton Woods II as part of my doctoral work.

As per the recent data of the Bank for International Settlements, the stock of dollar credit to non-financial corporations outside United States is $13 trillion. Of this, $ 4.2 trillion is the loans and debt securities mobilized by the emerging market economies. In this interdependent world economy, any change in monetary policy decisions of the advanced country central banks is of crucial importance in determining the cost of funding dollar liquidity. This is of consequence both from the angle of economic growth and financial stability of the developing countries. DR. Krishnakumar's work tries to locate the question relying on international economics databases and reports of central banks, IMF and BIS on aspects of global liquidity and financial stability. His work largely draws inspiration from the post-Keynesian literature in this regard.

Associated as member with International Development Economics Associates since 2005 and Indian Society of Labour Economics since 2016. In February 2022, his work on "Global Current Account Imbalances Since the 2008 Financial Crisis" was brought out as Sapru House Paper from the Indian Council of World Affairs.



Language in life and literature

My research work has been structured around the use of language in life and literature, and its mediations through culture and social life and events. For the last twelve years, after being awarded a Phd in 2009, I have engaged in public facing scholarship wherein I have contributed to newspapers, news journals, national and international journals.

My pieces in literary journals such as Ariel, Book Review, Biblio and Marg have engaged with reviews of contemporary creative and critical writing as well as the representations of women. I have also published several short stories, in Lapis Lazuli and Confluence and have actually published a short story in Hardnews that was later republished as a creative-critical essay in an academic book brought out by my colleague Meenakshi Bharat who brought out a book of essays on V.S. Naipaul.

My articles in Hard News, a monthly newsmagazine, have been written over a period of almost 14 years and have engaged with contemporary issues such as food traditions and travel as well as film, art, literature. My writing on Jallikattu, Sabari Malai, Me Too Movements and University Life have been very well received.

I have presented papers at the MLA conference in December 2021, a page of which I have recently submitted to college. I have also presented papers on Mahatma Gandhi's relevance to our times, examined Lessing's work in the context of the pandemic, and engaged with the relevance of translations in Multilingual India at ICLALS in 2021 and 2022.

My book, Re-envisioning Feminism: The Fiction of Doris Lessing was published by Bloomsbury in 2021.

Dr. Ratna Raman

Associate Professor,
Department of English

Research experience: 15 years

Teaching experience: 38 years

Publications: 200

Dr. Abhishek Chandra

Assistant Professor, Department of Environmental Science

Research experience: 20 years

Teaching experience: 11 years

Publication: 41

H-index: 10

Environmental Sustainability and Climate Change

Dr Abhishek Chandra is presently working as Assistant Professor, Department of Environmental Sciences, Sri Venkateswara College, University of Delhi. He is Accredited Functional Area Expert (FAE) for Ecology and Biodiversity by National Accreditation Board for Education and Training (NABET), Quality Control of India (QCI), Govt of India.

His research interests include i) Components of biodiversity that support ecosystem services; ii) Socio-economic and cultural dimensions; iii) Impact of Climate change on Agroecosystem sustainability; iv) Carbon sequestration and v) Traditional Agrobiodiversity Management Under changing climate and disaster.

He has long term project association with GBP National Institute for Himalaya Environment and National Institute of Ecology (NIE) for development and demonstration of rural technology parks in Himalayan states of India.

Currently he has received academic research grant on project entitled on "Ecosystem Restoration and Disaster Management" by National Institute of Disaster Management, New Delhi.

International Journal of Ecology and Environmental Sciences 47: 355-368, 2021
ISSN: 2320-5199 (Online)

Conservation and Sustainable Management of Traditional Agro-ecosystems in Central Himalaya, India

ABHISHEK CHANDRA[1*], VIKRAM SINGH NEGI[2], LAXMAN SINGH KANDARI[3], J. DINAKARAN[4], R.K MAIKHURI[5] AND KOTTAPALLI SREENIVASA RAO[6]

Vegetos (2021) 34:249–262
https://doi.org/10.1007/s42535-020-00167-w

RESEARCH ARTICLES

Impact of farm yard manure on cropping cycle in a rainfed agroecosystem of Central Himalaya

Abhishek Chandra[1] · P. Pardha-Saradhi[2] · R. K. Maikhuri[3] · K. G. Saxena[4] · K. S. Rao[5]

Amphibian Research and Conservation

Dr. Robin Suyesh

Assistant Professor,
Department of
Environmental Science

Research experience: 11 Years
Teaching experience: 7 years
Publications: 11
H-index: 7
Awards/Distinctions: 1

Background:
Dr. Robin Suyesh is a field biologist and has primarily worked on the amphibians of the South and South East Asia – (Western Ghats, Sri Lanka, Himalayan region of Indian subcontinent and Malaysian Borneo). His research till date has focused on understanding the behavior and ecology of some very interesting amphibian species in these three amphibian hotspots and also on unraveling the amphibian biodiversity in these regions through description of new species (Co-authored 13 new species till date).

Research Work in 2021
He published three research articles in the year 2021 in peer-reviewed Scopus indexed scientific journals (cumulative impact factor of 6). The research papers were in the areas of reproductive behaviour, vocal communication, taxonomy and conservation. The paper published in the journal *Salamandra* was on the reproductive behaviour and vocalization in Crocodile newt *Tylototriton himalayanus* from the Himalayan biodiversity hotspot in Eastern India. This was the first comprehensive study on the behaviour of *T. himlayanus* in the wild. It also provided the first description of vocalization of a salamander species. The second paper published in the journal *PeerJ*, described five new species of shrub frogs belonging to genus *Roarchestes* from the Western Ghats of India. It also provided the description of vocalization of 45 species of these shrub frogs from the Western Ghats. The study is significant, as it will aid in much needed conservation efforts to protect these endemic shrub frogs from the Western Ghats. The third paper published in journal *Zootaxa* questioned the validity of a newly described shrub frog from the Eastern Ghats of Southern India.

In addition to the research articles the short documentary “Croaking Frogs” made by the students of Sri Venkateswara College (mentored by Dr. Robin Suyesh) won Golden Beaver award (First position in “Out of the Box” Category) at National Science Film Festival 2020 and also won first position at International Science Film of India 2020.

Dr. Archana
Assistant Professor,
Department of Hindi

Teaching experience
5 years

हिंदी का स्त्री नाट्य लेखन

महिला-लेखन यद्यपि साहित्य लेखन के आरंभिक दौर से ही होता रहा है। लेकिन विशेष रूप से आधुनिक काल में विद्वानों ने इसे विशेष रूप से चिह्नित और विश्लेषित करने का कार्य आरंभ किया। आधुनिक काल में कथा साहित्य और कविता के क्षेत्र में 19वीं शताब्दी से ही महिला लेखकों ने अपनी उपस्थिति दर्ज कर दी थी जो आजादी से पूर्व तक अत्यंत व्यवस्थित रूप धारण कर चुका था। जिसे महादेवी वर्मा और सुभद्रा कुमारी चौहान ने अपनी कविता और कथा साहित्य के विपुल भंडार से समृद्ध किया। आजादी के बाद उषा प्रियंवदा, कृष्णा सोबती, मन्नू भंडारी, मैत्रयी पुष्पा, प्रभा खेतान, अनामिका, मीरा कांत, सविता सिंह, गगन गिल तथा कात्यायनी जैसी रचनाकारों ने नयी ऊँचाई प्रदान की। इन रचनाकारों ने अपनी लेखनी चलाकर साहित्य की सभी और नयी विधाओं: महिला-लेखन को इतना समृद्ध कर दिया कि अब महिला लेखन अपने आप के हिंदी साहित्य की एक महत्त्वपूर्ण धारा बन गयी है।

अध्ययन के क्रम में कई महत्वपूर्ण बातें उभर कर सामने आई हैं। महिला नाट्य लेखन एक तरफ अर्द्ध साहित्य की तरह देखा जाता रहा और आलोचकों की निगाह से लगातार उपेक्षित होता रहा तो दूसरी तरफ महिला नाटककारों ने रचनाकर्म में अनवरत संलग्न रहकर महिला नाट्य लेखन को नयी ऊंचाई प्रदान की।

दूसरी महत्वपूर्ण बात यह है कि महिला नाटककारों ने अपनी रचनाओं के माध्यम से जिस तरह वृहत स्तर पर सामाजिकता के प्रश्नों को उठाया है वह अपने आप में महिला नाट्य लेखन की महत्वपूर्ण उपलब्धि है। उनकी रचनाओं में स्त्री जीवन के बहुत संक्षिप्त अनुभव ही जगह बना पाते हैं। समाज के जटिल प्रश्नों जैसे राजनीति और समाज, इतिहास और वर्तमान के बीच संवाद, आतंकवाद और उसके परिणाम, सामाजिक अस्मिता से जुड़े प्रश्न, धर्म और साम्प्रदायिकता निम्नवर्गीय कामगार लोगों का जीवन तथा समाज में शोषण के प्रचलित तमाम रूपों के प्रति उनमें उदासीनता होती है या कहें उनकी लेखकीय समझ इन विषयों को उनकी गंभीरता के साथ नहीं देख पाती है। नादिरा ज़हीर बब्बर, मीराकांत, मन्नू भंडारी, कुसुम कुमार, मृणाल पाण्डेय, माधुरी सुबोध तथा त्रिपुरारी शर्मा की रचनाएँ पूर्वाग्रह पर आधारित इन बनी बनाई धारणाओं को झूठा साबित कर देती हैं। इन सभी विषयों पर अलग-अलग महिला नाटककारों ने पूरीगंभीरता के साथ अपनी कलम चलाई और साहित्यिक वैचारिकता के क्षेत्र में सतंक हस्तक्षेप किया है।

लोक साहित्य में भिखारी ठाकुर की रचनाएँ

Dr. Ram Kishor Yadav
Assistant Professor,
Department of Hindi

Publications:18 books

श्री वेंकटेश्वर कॉलेज, दिल्ली विश्वविद्यालय द्वारा श्री विप्रा माइनर प्रोजेक्ट के तहत भिखारी ठाकुर के साहित्य में चित्रित स्त्री विषय पर शोध कार्य करने का अवसर मिला। प्रोजेक्ट के तहत लोक साहित्य में भिखारी ठाकुर के संपूर्ण रचनाओं पर दृष्टि गई। भिखारी ठाकुर भारतीय लोक साहित्य के प्रणेता हैं। भोजपुरी साहित्य के रंगकर्मी हैं , लोकगीत तथा लोक नाट्य परंपरा के उन्नायक हैं। इन्हें भोजपुरी का शेक्सपियर नाम से जाना जाता है। भिखारी ठाकुर ने लोक साहित्य को जीवंत बनाया है। उनके मन में भोजपुरी लोक विराजमान है। लोक में व्याप्त समस्याओं पर उनकी दृष्टि है। भिखारी ठाकुर के 29 रचनाएँ हैं। इन सभी रचनाएं में समाज में व्याप्त समस्याओं का विवरण मिलता है। उनकी रचनाओं में स्त्री के विविध रूप व्याप्त हैं। सामाजिक राजनीतिक आर्थिक सांस्कृतिक सभी पहलुओं पर भिखारी ठाकुर ने अपनी दृष्टि केंद्रित की है। स्त्री का रूप विशिष्ट है। लोक से उनका सामाजिक सरोकार है। वह सोचती है, पर बोलती नहीं है। पुरुष सत्तात्मक समाज द्वारा लिए गए निर्णय को मानने के लिए विवश रहती है। ग्रामीण स्त्री के रूप में, शहरी स्त्री के रूप में, बेटी के रूप में, पत्नी के रूप में, प्रिया के रूप में, मजदूरनी के रूप में, वियोगिनी के रूप में, विलाप करने वाली स्त्री के रूप में स्त्री को भिखारी ठाकुर सामने लाए हैं। वह लोकगीतों की वाहिका के रूप में चित्रित है। स्त्री की सामाजिक स्थिति समाज में उनके साथ घटित घटनाएँ, उनकी स्त्री विषयक समस्याएँ भिखारी ठाकुर के साहित्य में विद्यमान हैं। उनके लोकनाट्य के प्रमुख पात्र स्त्री हैं और इन सभी को उन्होंने लोक साहित्य में विभिन्न भागों में सामने लाया है ।

विदेशिया भिखारी ठाकुर का लोकनाट्य है। इसमें स्त्री के वियोग का वर्णन है। उसका पति परदेश चला गया है। अपने पति की अनुपस्थिति में वह तरह-तरह की यातना झेलती है । उन सभी का वर्णन विभिन्न रागों में विदेशिया में वर्णित है। भिखारी ठाकुर ने प्यारी सुंदरी के माध्यम से स्त्री विमर्श को सामने लाए हैं। ग्रामीण समाज में प्रचलित उन सभी समस्याओं को सामने लाए हैं। इसमें विविधता है, व्यापकता है एवं गहराई है। शोध कार्य ने हमें इस पर विशिष्ट कार्य करने का नया आयाम प्रदान किया है।

Prof. Richa Mishra
Professor, Department of Hindi

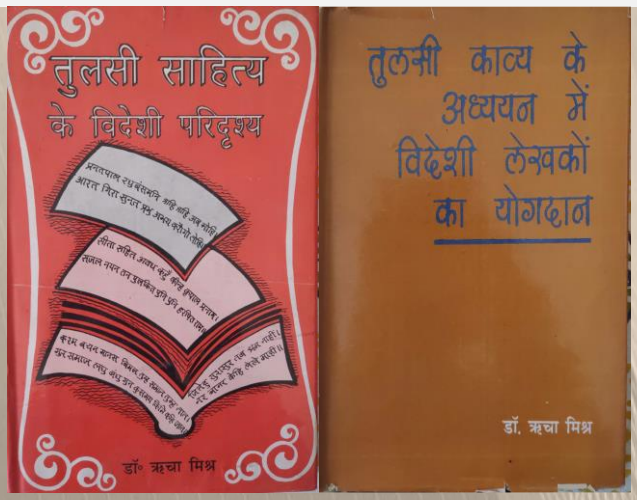
Publications: 25 (21 Research articles and 4 books)

हिंदी की विश्व-व्यापकता

हिंदी आज विश्व की सबसे अधिक प्रयोग की जाने वाली भाषाओं में द्वितीय स्थान पर है। आज हम इसे खड़ीबोली हिंदी कहते हैं, जिसमें अनेक प्राकृतों और अपभ्रंशों से उत्पन्न हुई बोलियों का मिश्रण है। 18वीं शताब्दी के अंत में भारत में समाचार पत्रों के विकास तथा विश्व के अन्य देशों से बढ़ते वैचारिक आदान-प्रदान के कारण हिंदी गद्य की आवश्यकता महसूस की जाने लगी, जिसके प्रारंभिक स्वरूप का निर्माण करने का कार्य कलकत्ता के फोर्ट विलियम कॉलेज में चार विशेषज्ञों को सौंपा गया। हिंदी के व्याकरण का रूप स्थिर होने के साथ भारतीयों के साथ साथ अंग्रेज शासकों को भी भारतीय जनता के निकट आने के लिए भाषा को समझने की ज़रूरत महसूस हुई। उसके लिए उन्होंने यहाँ के सबसे लोकप्रिय महाकाव्य गोस्वामी तुलसीदास रचित, 'रामचरितमानस' को न केवल पढ़ा, बल्कि उसके अंग्रेजी अनुवाद भी किए।

'श्रीरामचरितमानस' का पहला अंग्रेजी अनुवाद सन् 1876 में एफ. एस. ग्राउस नाम के एक अंग्रेज प्रशासनिक अधिकारी द्वारा किया गया। इसके बाद अलेक्सेई पेत्रोविच वारान्निकोव ने सन् 1948 में द्वितीय विश्व युद्ध की विभीषिका को झेलते हुए 'रामचरितमानस' का रूसी पद्यानुवाद प्रस्तुत किया। एक अन्य अंग्रेजी अनुवाद, डगलस पी. हिल ने सन् 1952 में किया। इस प्रकार भारत की चेतना और अस्मिता को रुपायित करने वाला यह महाकाव्य विश्व में धीरे धीरे लोकप्रिय होता चला गया और आज अंग्रेजी के अलावा फ्रेंच, पोलिश, चीनी, तथा जापानी भाषा में भी इसके अनुवाद उपलब्ध हैं।

'रामचरितमानस' के अनुवादों के अतिरिक्त, हिंदी साहित्य के इतिहास लेखन का पहला प्रयास एक फ्रेंच विद्वान गार्सां द तासी ने किया तथा भारत का पहला 'भारत-सर्वेक्षण' करने का श्रेय भी एक अंग्रेजी प्रशासक डॉ. जॉर्ज अब्राहम ग्रियर्सन को जाता है। कहा जा सकता है कि हिंदी के प्रारंभिक विकास और उसे विश्व में लोकप्रिय बनाने में विदेशी हिंदी प्रेमियों का बड़ा योगदान है।

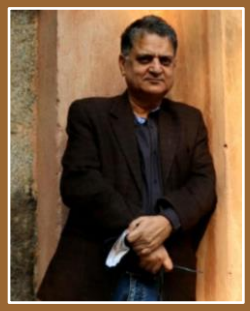


Preservation of Traditional Architecture

Professor Nirmal Kumar obtained his Ph. D. on Socio Economic Basis of Crime in 17th and 18th Centuries of Mughal India from University of Delhi. The breaking of ground of the research was that it argued that the Mughal state system was not pan Indian, and just near Delhi, in Rajasthan, the evaluation of punishment regime of Rajay states gave way to non-Mughal, non Islamic notions of governance. From there he moved to gender study of Medieval Rajasthan.

He did projects on ‘Buddhism in modern India’, ‘Decay of Portuguese houses in Goa’ and ‘Condition of Qawwali in India’. A major breakthrough was grant of the Rs. 50 lakh project from Ministry of Environment and forest and Climate Change, Government of India in 2019 to work on preservation of traditional hill houses of Almora and turn them into homestays to allow villagers to earn and not abandon the villages. Our major achievement was that we kept the traditional material and building styles intact while providing rainwater harvesting and bathrooms for every house besides furniture and furnishings. the houses and owners are now determined to live in these houses and bring in income to villagers too.

Currently he is working on heritage houses under the ICSSR project on Hindu Houses of Goa. In another project he is working under ICHR on censorship in colonial Bihar.



Prof. Nirmal Kumar

Professor,
Department of History

Research experience: 36 Years
Teaching experience: 36 Years

Publications: 5

Prof. Vandana Joshi

Professor, Department of History

Research experience
20 years
Teaching experience
20 years
Publication: 12
H-index:

Awards/Distinctions

- Fraenkel Prize in Contemporary History, Wiener Library, London
- Alexander von Humboldt Fellowship, Germany
- Visiting Fellowship Programme for International Masters in Economy, State and Society (IMESS), European Union
- Charles Wallace India Trust Grant, UK Arbeitsstelle Historische Anthropologie, Visiting Fellowship Erfurt University, Germany

British Indian soldiers in WWII Germany

Professor Vandana Joshi did her doctorate from Technical University Berlin in 2002 as a DAAD fellow. Apart from Erasmus Mundus and Charles Wallave Trust grants, she received a senior researchers grant from the Humboldt Foundation in 2012. She has published internationally on Nazi Germany and WWII. During her visiting professorship at the Humboldt University Berlin in 2014-5, she got involved with a long term DFG digital archiving and research project called Modern India in German Archives (MIDA) and is serving as a permanent Advisory Council member (2016-26). The two recent publications cited here are a result of her engagement with MIDA.

MIDA ARCHIVAL Reflexicon

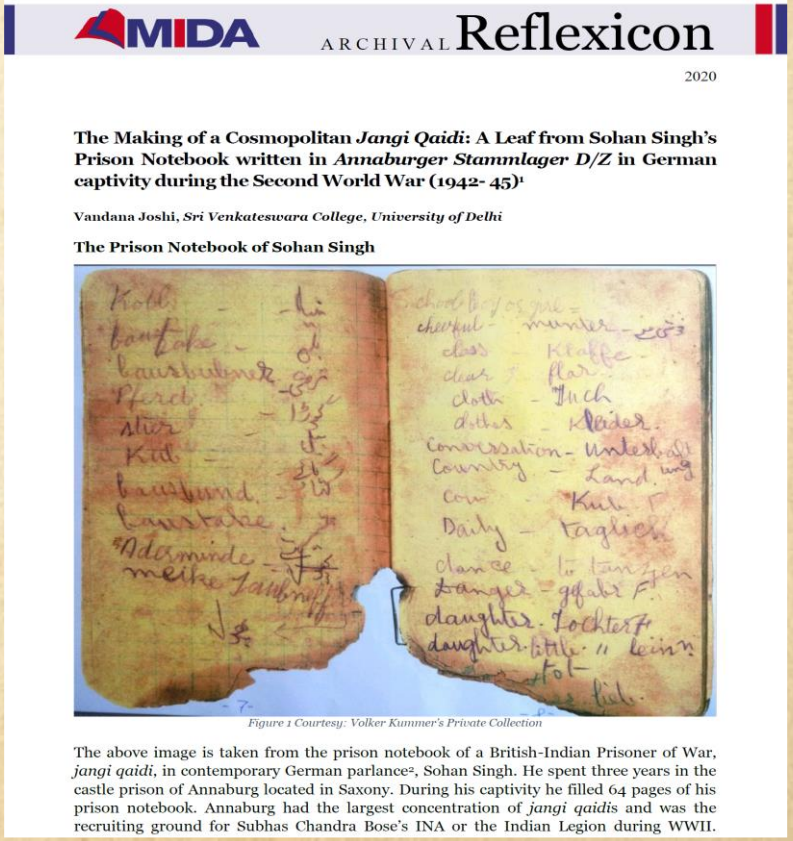
2019

Memory and Memorialisation, Interment and Exhumation, Propaganda and Politics during WWII through the lens of International Tracing Service (ITS) Collections

Vandana Joshi, *Sri Venkateswara College, University of Delhi*

The International Tracing Services (ITS) as a unique archive

This post brings to attention the existence of an international archive in the heart of Europe, largely overlooked by South Asian researchers working on WWII, who routinely visit the India Office Library (British Library), the National Archives of India, (The National Archives in Kew, UK and other regional archives engaging with the history of the British Raj. The (ITS) holdings complement the aforementioned sources both quantitatively and qualitatively if one is writing the history of British-Indian soldiers and civilians. Its speciality lies in giving historians access to individual destinies of South Asian soldiers, who entered the registers of German officialdom as an enslaved mass, serving a specific purpose in captivity, and the civilians who endured in the vagaries of the Third



MIDA ARCHIVAL Reflexicon

2020

The Making of a Cosmopolitan *Jangi Qaidi*: A Leaf from Sohan Singh's Prison Notebook written in *Annaburger Stammlager D/Z* in German captivity during the Second World War (1942- 45)[1]

Vandana Joshi, *Sri Venkateswara College, University of Delhi*

The Prison Notebook of Sohan Singh

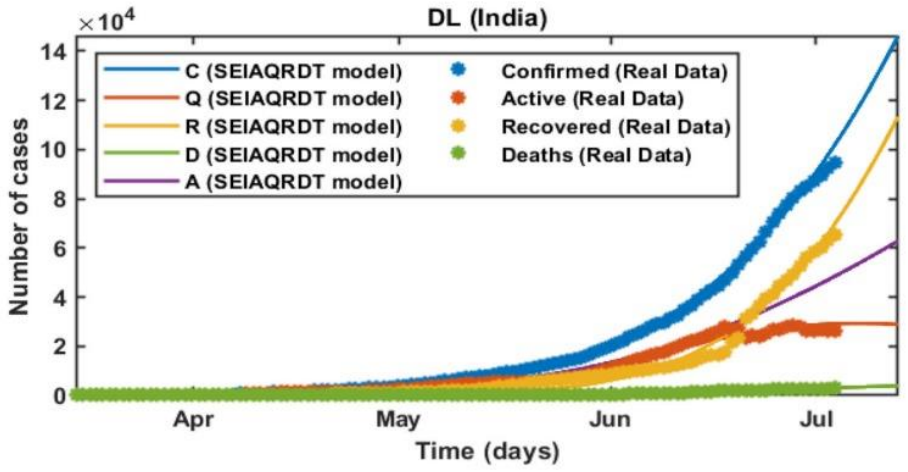
Figure 1 Courtesy: Volker Kummer's Private Collection

The above image is taken from the prison notebook of a British-Indian Prisoner of War, *jangi qaidi*, in contemporary German parlance[2], Sohan Singh. He spent three years in the castle prison of Annaburg located in Saxony. During his captivity he filled 64 pages of his prison notebook. Annaburg had the largest concentration of *jangi qaidis* and was the recruiting ground for Subhas Chandra Bose's INA or the Indian Legion during WWII.

Mathematical Modelling

Prof. Swarn Singh received his Ph.D. degree from the Department of Mathematics, University of Delhi in the filed of Computational Methods for Partial Differential Equations in 2007. He has more than 24 years of teaching and research experience. Apart from teaching Undergraduate classes at Sri Venkateswara College, he has also taught Masters classes at University of Delhi, South Asian University and University of Kashmir. His research interests include Numerical methods based on Finite Difference, Finite Element, Splines, Collocation etc. for the solution of Partial Differential Equations. He has visited University of Dundee, U.K. under INSA-RSE bilateral exchange program to carry out advanced research work in his field of research. He also visited North Carolina State University, USA as a research visitor on sabbatical. He has published 34 research papers in various international academic Journals of repute. He has guided 4 Ph.D. and 3 M.Phil. Students. Currently 3 Ph.D. scholars are working under his supervision. He is a regular reviewer of many international Journals. Some of his recent published papers are:

1. "SEIAQRDT model for the spread of novel coronavirus (COVID-19): A case study in India*"*. *Applied Intelligence,* Vol.51(5), pp.2818-2837https://doi.org/10.1007/s10489-020-01929-4(2020).
2. "Bifurcation and Stability Analysis of Glucose-Insulin Regulatory System in the Presence of β- Cells*"*. *Iranian Journal of Science and Technology,* ,Vol.45(5), pp.1743-1756, https://doi.org/10.1007/s40995-021-01152-x (2021).



Prof. Swarn Singh

Professor, Department of Mathematics

Research experience
25 years

Teaching experience
24 years

Publication: 34

H-index: 8

Awards/Distinctions:

- *M.Bholanath Medal* for getting 1st Rank in Delhi University in B.A.(Hons.) Mathematics.
- Visited University of Dundee, Scotland, U.K. during the period 6th September 2012 to 4th October, 2012 under INSA-RSE Bilateral Indo-UK Joint Exchange Programme to carry out advanced Research in 'Computational Methods for Differential Equations'.
- Selected Vice Chancellor's Fellow under Vice Chancellor's Fellowship Programme at University of Delhi for the period Jan, 2014 -July 2014.

Prof. Anant Pandey

Professor,
Department of Physics

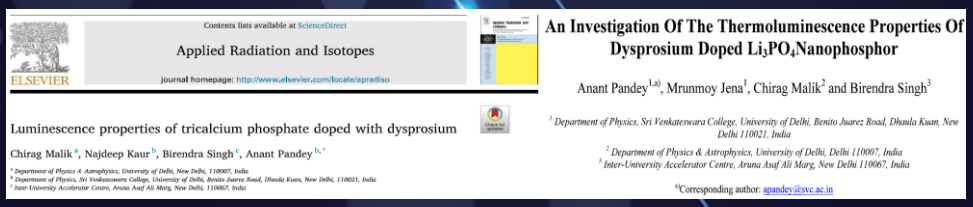
Research experience: 6 years
Teaching experience: 18 years
Publications: 35 (Scopus listed)
H-index: 13
Awards/Distinction: Faculty Training Programme Fellowship (University of Nottingham, UK 2012-2013)Vice Chancellor's Fellowship (University of Delhi 2014)Postdoctoral Fellowship (Louisiana State University, USA 2017)

Radiation Dosimetry and Synthesis Lab

The deadly disease called cancer is a condition where cells in a specific part of the body multiply in an uncontrolled fashion invading and destroying the surrounding normal healthy tissues including the critical organs thereby causing severe damage to the overall functioning of the body. As per the data obtained from the U.K. one in every two persons which is nearly 50% of their population has the probability of developing some form of cancer during their lifetime. In fact as per the latest data released by the WHO, cancer is a leading cause of death worldwide, accounting for nearly one crore deaths in the year 2020 alone, which means that nearly one in every six deaths are due to cancer. However, nearly all cancer patients having localized cancers called tumors receive radiation therapy as a definitive therapy in addition to surgery and chemotherapy.

Now, deliverance of the optimal radiation dose to the tumor region and sparing of the surrounding normal tissue from unnecessary radiation exposure are two of the most important points that need to be kept in mind while carrying out radiotherapy treatment planning by the oncologist in consultation with the medical physicists. This is because deliverance of a higher dose than the optimal value will only cause more damage while deliverance of a lower dose may simply prove to be ineffective. So therefore, to take care of these points we require radiation dosimeters that can measure the radiation doses accurately and therefore assist the radiotherapy treatment planning in a big way. In fact one of the major objectives of people working in the field of experimental radiation physics is to develop radiation dosimeters that can measure radiation doses accurately over a very wide range of values.

We at the Radiation Dosimetry and Synthesis Lab, Department of Physics, Sri Venkateswara College too have been working in this very field of radiation dosimetry where we synthesize dosimeter materials, mostly inorganic thermoluminescent dosimeter materials that are used for measuring doses of highly energetic ionizing radiations like x-rays, gamma-rays and ion beams that are used in radiotherapy.



Electroceramics Research Group

Established in 2008, the Electroceramics Research Group at Sri Venkateswara College soon evolved into a vibrant academic centre in the college for advanced learning and cutting-edge research in experimental physics. Our group has successfully completed three Major Research Projects - one from UGC entitled “Synthesis of lead free piezoelectric materials from nanoceramic powders” and two from DST “Development of lead free alkaline niobate based piezoceramics” and “Ferroelectric and Piezoelectric properties of modified barium titanate ceramics”. These projects have not only resulted in the publication of over 50 research articles in reputed international journals but also provided the much-needed expertise and impetus to develop a well-equipped electroceamics lab in the college.

The outgoing students from our group include

- 4 Ph. D. students who have got their doctorate degrees awarded by University of Delhi,
- 16 undergraduate students who have become co-authors in our research publications and further gone on to distinguished academic career in India and abroad.

We are involved in investigation of structural, dielectric, ferroelectric and piezoelectric properties of a wide variety of electroceramics. Our research interest extends from understanding fundamental quantum mechanical effects in nanosystems and critical behaviour in smart materials, to developing environment-friendly lead-free piezoceramics for various industrial applications.

Piezoceramics are widespread from daily life (mobile phones, cameras, computers) to cutting edge technologies (STM, MRI, MEMS). The most widely used piezoceramics are $PbTiO_3$–$PbZrO_3$ (PZT)-based multi-component systems for their excellent piezoelectric properties. However, as the major composition of PZT is lead, which is a toxic heavy metal, the use of PZT has a potential danger to the environment and human health. Lead poisoning has long been considered as an environmental health hazard, for its adverse effects on intellectual and neurological development.

One major objective of our group has been to develop lead-free piezoceramics which are more environmental-friendly and risk-free than PZT, and at the same time competent enough to replace the widely used PZT in all piezoelectric applications. We are currently working on lead-free piezoceramics based on alkaline niobate and barium titanate systems.

Prof. K. Chandramani Singh

Professor, Department of Physics

Research experience: 32 years
Teaching experience: 27 years

Publications: 66
H-index: 12
Citations: 467
i10-index: 17

Dr. Manoj Giri

Assistant Professor,

Department of Physics

Research experience: 15 Years

Teaching experience: 15 Years

Publications: 27

H-index: 05

Award

- Awarded Sir Ibrahim Scholarship by University of Mumbai to carry out research on Dyes

Spectroscopic Analyses of Azo-Dyes

Azo dyes constitute the most important class of industrially synthesized organic compounds and have reached the widest range of usage because variations in chemical structures are directly achievable. These dyes are simply defined as any class of synthetic dyes that contains one or more azo groups (−N=N−). In the light of the variety of diverse applications of azo dyes such as in laser dyes, nonlinear optical devices, photonics, antibacterial and antitumor. it is conceivable to study such azo dyes and their derivatives in order to unfold more potential of such compound by using spectroscopic techniques. We have determined various important optical parameters of the scientific value of these dyes.

Publications in peer reviewed Journal:

1. Fluorescence Spectral Properties of Methyl Orange in Homogeneous Media. Babita Bisht, P. Bhardwaj, Manoj Giri and Sanjay Pant, *J Fluoresc* 31, 1787–1795 (2021). *Springer, IF: 2.217,* https://doi.org/10.1007/s10895-021-02820-2.

2. Static and dynamic fluorescence spectroscopic analyses of direct yellow 27 - an azo dye, Babita Bisht, Sanjay Pant and Manoj Giri, *Indian Journal of Physics (2021)* ISSN: 0974-9845 (Online); 0973-1458 (Print); *Springer, IF: 1.947,* //doi.org/10.1007/s12648-021-02040-1.

Papers in conference:

1. An analysis of electronic absorption spectrum of methyl red - an azo dye, Sejal Chandna, Kamalpreet Kaur, Anushka Pahuja & Manoj Giri, International Conference on “Recent Advances in Functional Materials (RAFM-2022), 14 - 16th March 2022 at ARSD (University of Delhi) PP-01.

2. Spectral analysis of methyl orange and its interaction with protein by UV-Visible Spectroscopy, Jassika Gupta, Sejal Chandna, Akash Verma, Priyansh Agarwal & Manoj Giri, International Conference on “Recent Advances in Functional Materials (RAFM-2022), 14 - 16th March 2022 at ARSD (University of Delhi) PP-73.

Act East Policy and North Eastern Region

Deepika Singh has pursued M.A (International Relations), M.Phil, Ph. D. (Centre for Canadian, US and Latin American Studies, School of International Studies) from Jawaharlal Nehru University, New Delhi. She has presented number of papers on topics related to India's Energy Need and Central Asia, Feminism, Sixth Schedule, India's Act East Policy and North Eastern Region of India and Civilizational discourses in the same region of India in various National and International conferences. She is teaching Political Science in University of Delhi since 2009 and joined Sri Venkateswara College in 2016. She has completed a major project from Indian Council of World Affairs (ICWA) on “India and Myanmar Infrastructure and Energy Cooperation: Study of Kaladan Multi Modal Project”. “She also has a major project from ICSSR on “Migration in North East India .”

Dr Deepika Singh

Assistant Professor,
Department of Political Science
Teaching experience 13 years
Publications: 16
(12 Research Papers and 4 popular articles)

Sociology

Prof. Nabanipa Bhattacharjee
Professor, Department of Sociology

Research experience: 26 years

Teaching experience: 23 years

Publications: 45

Research in an integral part of every academic discipline. Along with teaching, research indicates and contributes not only to the growth and health of a particular discipline but also to the dynamic academic culture of the institution where it is conducted. Currently (2020-2022), there are five students of Sociology registered under my supervision for M.Phil. & Ph.D. research. The following are the students and brief themes/summaries of their works-in-progress:

1. Akashleena Basu (M.Phil.) is working on 'Knots and Knives: Towards an Anthropology of Everyday Slaughter', this work engages with the act of everyday slaughter as practiced by the Muslim butchers. In the context of contested histories centering on Islam in South Asia, the work puts the scholarship on sacrifice, materiality of religious value creation in a secular market space and ethics into conversation with the literature on human and non- human relations.

2. Abhivyakti Vivek (Ph.D.) works on titled 'Education and State Intervention: A Study of a Model School in New Delhi', this work looks at how the changes introduced by the Delhi government in its education policies since 2015 have impacted the educational condition and status of two Model Delhi Government schools. The model schools being considered for the study are the Rajkiya Pratibha Vikas Vidyalaya (RPVV), Dwarka and Nanakpura Sarvodaya Vidyalaya, Moti Bagh.

3. Muhammad Saad (Ph.D.) Tentatively titled 'Online Extremism: Social Media Serving as Hosts to Extremism and Ideological Dissemination by Extremists', this work attempts to comparatively identify and analyze the patterns of extremist ideological propaganda and to Extremism and Ideological Dissemination by Extremists', this work at attempts to comparatively identify and analyze the patterns of extremist ideological propaganda and its dissemination by Muslim and Hindu online users of social media, in particular Twitter. In other words, the work examines how different forces animate digital technology use and analyzes the digitally mediated interaction of religious extremists.

4. Mukul Pandey (Ph.D.)

Tentatively titled 'Rethinking Resilience: Inquiring Indigeneous Agricultural Movement in Barendrabhumi, West Bengal', this work intends to elucidate the complex dynamics of indigenous knowledge systems of agro-ecology and the food sovereignty model in the Barendrabhumi region of West Bengal (Raiganj block, North Dinajpur).

5.Tanmay Singh (Ph.D.)

Tentatively titled 'Disjunction between "youth aspirations" and the socio-politico-cultural reality of Muslims in Meerut', this work critically analyzes the social, economic, political and cultural conditions that make up the external environment of Muslim youth in the country with special focus on Meerut located in Uttar Pradesh. The work attempts to examine the limiting effect of such realities on the "aspirations" of young minds and discover the diverse practices they engage with in order to get rid of the tag of "backwardness". This fissure between "aspirations" and "reality" also calls for an interpretation of the dialectical relationship existing between them and the synthesis of which is evident from the rise of a small Muslim middle class in the region in recent times.

Tamil

Prof. S. Seenivasan has completed his PG & Doctoral Degree from Madurai Kamaraj University and his area of research interest is Tamil Language & Literature, Comparative Indian Literature, Classical Tamil Literature, Folklore, Modern Tamil Literature & Anthropology. He authored and edited about ten (10) books. One of his recent research books entitled 'Arunthathiars of Tamil Nadu: History and Life' got 'Best Research Book Award' by the Government of Tamil Nadu.

Prof. S. Seenivasan has written and published more than 65 research articles in refereed & reputed journals as print & electronic.

The following two articles got 'Best Research Paper Award.

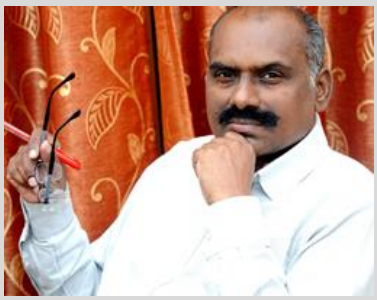
i) 'Open Defecation in Villages of Tamil Nadu' by Chennai based 'Chinna-k-Kuththusi Trust' , Chennai, in the year 2016.

ii)'An Ethnographic Study of Occupational and Cultural Artists as reflected in Tamil Classical Literature' by Research Committee, Sri Venkateswara College for the year, 2019-2020.

Mr. K. Suresh registered under his supervision and successfully completed Ph.D. in Department of Modern Indian Languages & Literary Studies, University of Delhi in the year of 2019.

Prof. S. Seenivasan has successfully completed one UGC-MRP and evaluated more than 100 Ph.D. theses for various Universities of Tamil Nadu and JNU.

Currently, he is working on his eleventh book entitled 'Diaspora Literature and Tamils Diaspora' which contains ten chapters.



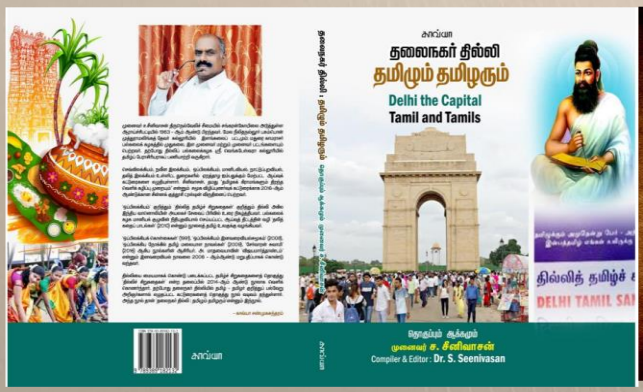
Prof. S. Seenivasan

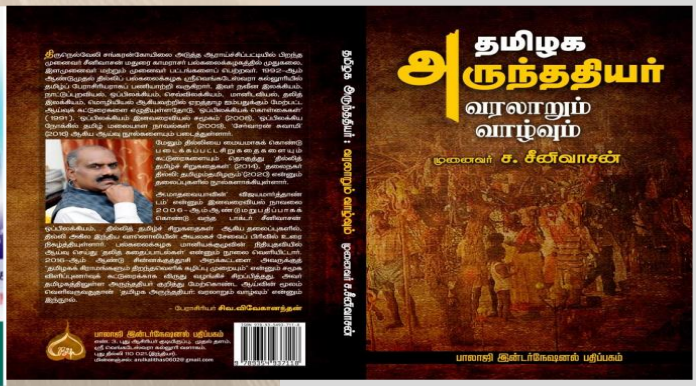
Professor, Department of Tamil

Research experience

Teaching experience

Publications: 75





Dr. Sirisha Eedpuganti

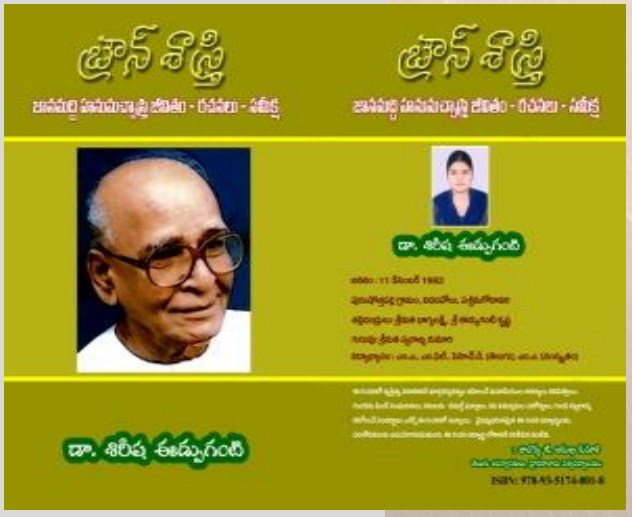
Assistant Professor,
Department of Telugu

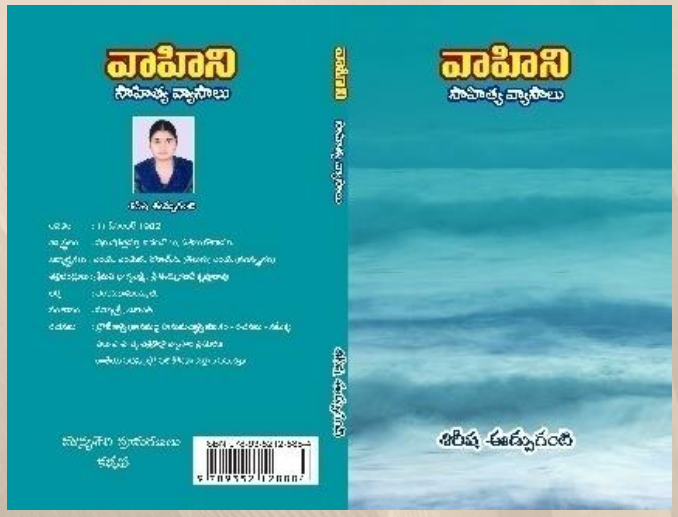
Research experience:
2 years
Teaching experience:
2 years

Telugu

Dr. Sirisha Eedpuganti is working as an Assistant Professor, Department of Telugu, Sri Venkateswara College, University of Delhi, Delhi. She has completed her M.A., M.Phil., Ph.D. in Telugu from University of Hyderabad, Hyderabad and M.A. in Sanskrit from Sri Potti Sriramulu Telugu University, Hyderabad. She has Completed her M.Phil. and Ph.D. with research topics 'Treatment of Adjectives in English Telugu Machine Translation,' 'A study of vocabulary pertaining to chemistry in the context of English Telugu Machine Translation', respectively. Dr. Sirisha is presently working on a book entitled 'Ekavali' and it contains ten literary essays written on various Telugu topics. These articles discusse about the important autobiographies and biographies, historical, social novels and ancient literary works in Telugu. She has tried to discuss in the articles on the historical background of literary work, portrayal of the characters, and unique features and place of the literary work in Telugu literary world.

She has authored two books entitled Brown Sastri (Life of Janamaddi Hanumachastri, Literary Works- Review), Vahini (Literary Essays).



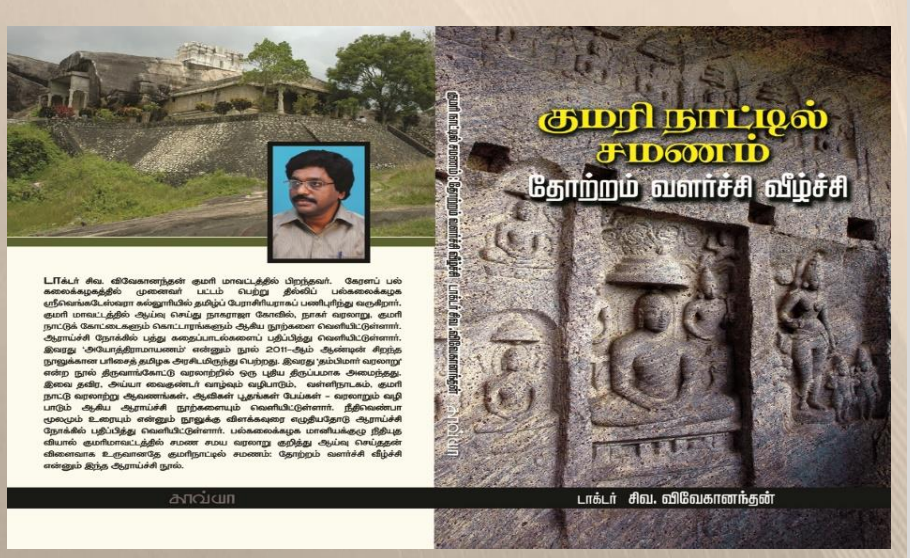


Telugu

Dr. S. Vivekananthan, Professor, Department of Tamil, obtained masters from Madurai Kamaraj University and completed M.Phil and Ph.D. in Kerala University. He has written more than 50 research articles have been published in various literary journals and collection of seminar articles. Under his supervision, six M.Phil. degrees and one Ph.D. degree have been awarded. He has successfully Completed two major research projects funded by UGC:

1. *History of Jainism in Kanyakumari District: Origin, Growth and Downfall*
2. *History of Forts in Kumari Nadu*

Till date, he has authored and published 26 books. His special areas of interest are Manuscriptology and Archaeology. Out of the 26 books written by him, 14 books are about Manuscriptology and 8 books are on Archaeology.



Prof. S. Vivekananthan

Professor,

Department of Telugu

Research experience: 17 years
Teaching experience: 2 years

Dr. Mansi Verma

Assistant Professor,

Department of Zoology

Research experience: 15 years

Teaching experience: 11 years

Publications: 28

Book Chapters: 5

H-index: 16

Awards/Distinctions

- 2021- Bill and Melinda Gates Abstract award
- 2017- Young Scientist Award

Comparative genomics of viruses and bacteria

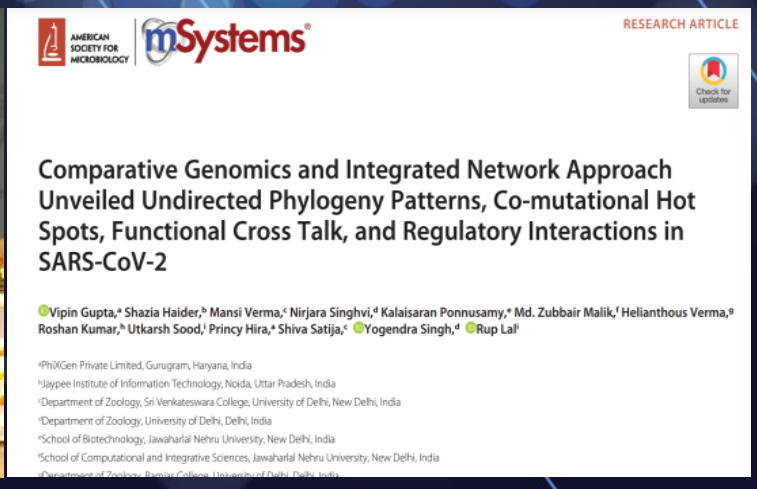
Dr. Mansi Verma joined as Assistant Professor at Sri Venkateswara College in 2011, and since then she has trained more than 35 students in various projects. Her areas of expertise are genomics, Comparative genomics, Bioinformatics, microbiology and Virology.

Her recent work revolves around performing comparative CpG island analysis of SARS-CoV-2. To further extend work on SARS-CoV-2, Dr. Mansi initiated docking studies on variants of SARS-CoV-2.

Dr. Mansi is the recipient of many awards. She has bagged AMI Young Scientist Award, recipient of International Travel Grant by DST-SERB and TTD (Tirumala Tirupati Devasthanams) for attending conference in China and Singapore, respectively. She has won few Best Oral Talks and poster presentation Awards, showing her commitment towards her work.

To review, her contributions can be seen as 28 research articles in journals of International reputation, she was an invited author for four chapters by Springer publications, she has contributed to national mission of digital India in form of 8 e-lessons at ILLL (Institute of Life Long Learning) and 1 book chapter of national status.

Because of her all the above mentioned contributions, she has served as an International reviewer for three projects at a network of translational research platforms in Switzerland funded by Swiss University Conference and the Swiss Federal Institutes of Technology (2013) and BiodivERsA under the he Horizon 2020 ERA-NET COFUND scheme (2018-19).



AMERICAN SOCIETY FOR MICROBIOLOGY | mSystems®

RESEARCH ARTICLE

Comparative Genomics and Integrated Network Approach Unveiled Undirected Phylogeny Patterns, Co-mutational Hot Spots, Functional Cross Talk, and Regulatory Interactions in SARS-CoV-2

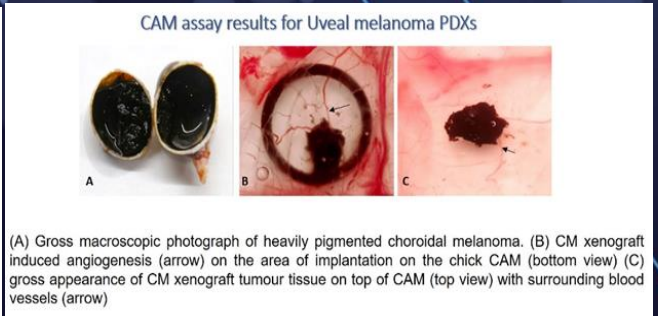
Vipin Gupta,[a] Shazia Haider,[b] Mansi Verma,[c] Nirjara Singhvi,[d] Kalaisaran Ponnusamy,[e] Md. Zubbair Malik,[f] Helianthous Verma,[g] Roshan Kumar,[h] Utkarsh Sood,[i] Princy Hira,[e] Shiva Satija,[c] Yogendra Singh,[d] Rup Lal[i]

[a]PhiXGen Private Limited, Gurugram, Haryana, India
[b]Jaypee Institute of Information Technology, Noida, Uttar Pradesh, India
[c]Department of Zoology, Sri Venkateswara College, University of Delhi, New Delhi, India
[d]Department of Zoology, University of Delhi, Delhi, India
[e]School of Biotechnology, Jawaharlal Nehru University, New Delhi, India
[f]School of Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi, India

Applications of the Chick Chorioallantoic Membrane (CAM) as an Alternative Model for rare Ocular Cancer Studies

A variety of in vivo experimental models have been established for the studies of human cancer using both cancer cell lines and patient-derived xenografts (PDXs). However, PDX have primarily been established in immunodeficient rodent models, with accompanying cost and efficiency constraints that pose barriers to more widespread adoption. The chick embryo chorioallantoic membrane (CAM) is an alternative model to overcome some of these limitations.

Dr. P. Jayraj works on providing an overview of the applications of the chick CAM model in the study of ocular oncology. The CAM model has shown significant retention of tumor heterogeneity alongside increased xenograft take rates of aggressive and rare ocular carcinomas. In his recent study, he has demonstrated for the first time that CAM is an efficient system to establish xenografts from small tumor pieces from patient-derived Retinoblastoma or uvela melanoma tissue samples. Given the high efficiency of PDXs engraftment on CAM in a short 10-day period, it holds great promise as an *in vivo* platform to pursue pilot drug screening on individual patient's tumor. Overall, the CAM provides a simple, inexpensive, and quantifiable alternative to other *in vivo* techniques. Its high vascularity stimulates tumor growth and facilitates analysis of angiogenic effects, and the immaturity of its immune system allows implantation of varied cell types from various tumor types including Ocular carcinomas.



(A) Gross macroscopic photograph of heavily pigmented choroidal melanoma. (B) CM xenograft induced angiogenesis (arrow) on the area of implantation on the chick CAM (bottom view) (C) gross appearance of CM xenograft tumour tissue on top of CAM (top view) with surrounding blood vessels (arrow)

Dr. P. Jayaraj
Assistant Professor,
Department of Zoology

Research experience
15 years
Teaching experience
10 years

Publications: 12

H-index: 5

Awards/Distinctions

- Awarded best PhD Research Fellow by Ophthalmic Research Association, Dr. R P. Centre, All India Institute of Medical Sciences
- Awarded Delhi University gold medal in B.Sc (H) examination
- Best Oral and poster presentation Awards in various national and international conferences (6)

Dr. Richa Misra

Assistant Professor,
Department of Zoology

Research experience:
14 years
Teaching experience:
10 years

Publications: 25

H-index: 13

Awards:

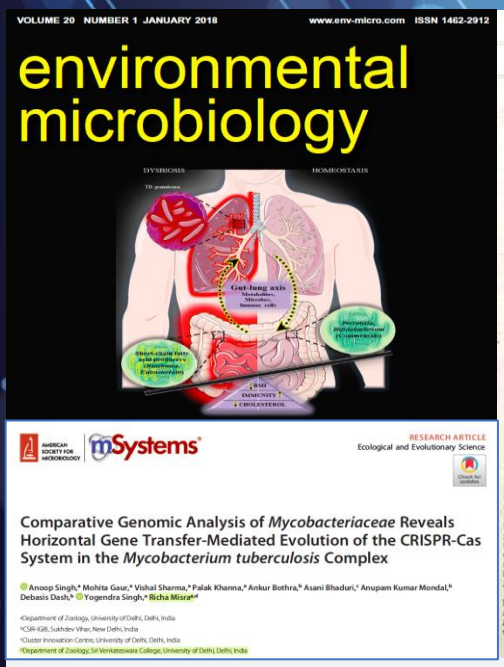
Best Research Paper Award by Research Committee, Sri Venkateswara College for the year, 2019-2020

Tuberculosis biology and Gut microbiome-host interactions

Dr. Richa completed her Ph.D. in Biotechnology, Department of Microbial Pathogenesis, CSIR-Institute of Genomics and Integrative Biology, Delhi. HEr Current research focuses on studying the mycobacterial genomes and stool metagenomes with tools of computational biology to understand the implications in TB biology. Also, working towards development of effective alternative of TB diagnostics by stool testing of TB patients, apart from studying the epidemiologial risk factors for TB in India.

Recent publication

1. Singh A ….. Singh Y*, Misra R*. Comparative Genomic Analysis of Mycobacteriaceae Reveals Horizontal Gene Transfer-Mediated Evolution of the CRISPR-Cas System in the Mycobacterium tuberculosis Complex. mSystems. 2021 Jan 19;6(1):e00934-20. *Equal Corresponding IF: 6.280
2. Maji A §, Misra R §, et al.. Gut microbiome contributes to impairment of immunity in pulmonary tuberculosis patients by alteration of butyrate and propionate producers. Environ Microbiol. 2018 Jan;20(1):402-419. § Equal Contribution. ISSN: 1462-2920, IF: 5.491




THE HINDU
SUNDAY, APRIL 15, 2018

How gut bacteria affect immunity

Composition of the gut colony differed in TB patients

ASWATHI PACHA

The abundance and type of bacteria in the intestine gets altered when infected with tuberculosis, a study by Indian researchers shows.

The team studied the gut bacteria of six patients diagnosed with TB and compared them with one healthy relative from each household. Despite the food consumed by the patients and healthy individuals remaining the same, there were significant differences in the type and abundance of gut bacteria.

The faecal samples of the two groups were examined at three different time points – immediately after TB diagnosis, one week after treatment and one month after treatment.

They found that *Prevotella* and *Bifidobacterium* were abundant in the healthy individuals. "These bacteria are important for normal digestion and metabolism of the body. You can find them in abundance in the Indian gut due to the carbohydrate-rich diet," explains Dr. Richa Misra from Sri Venkateswara College, Delhi, one of the first authors of a paper published in *Environmental Microbiology*.

In TB patients, bacteria like *Faecalibacterium*, *Roseburia*, *Eubacterium* and *Phascolarctobacterium* were significantly higher. "These bacteria are known to produce short-chain fatty acids like butyrate and propionate, which are important for our gut, but their increased abundance can also lead to anti-inflammatory response, altering the immunity of our body," says Prof. Vineet K. Sharma at the Department of Biological Sciences, Indian Institute of Science Education and Research (IISER) Bhopal and one of the co-authors of the paper. "The high number of these bacteria can also alter the normal metabolism of our body and can even reduce the appetite."

Tuberculosis is usually associated with low BMI and low cholesterol levels. As butyrate and propionate regulate appetite-regulatory gut hormones and cholesterol bio-synthesis, a balance of these microbes is critical. "This makes more studies on gut microbiome extremely crucial since upsurge in butyrate and propionate-producing bacteria may prove detrimental for host response in infectious disease such as TB," adds Dr. Misra.

One month after treatment, the gut microbes did not return to their original abundance highlighting the requirement of the six-month-long TB regimen.

"Nonetheless, recovery in microbial pathways involved in amino acid and vitamin metabolism were observed by one month as indicated by the functional gene pool.

"We have planned to further carry out cause-effect study as we are still unsure if the TB infection is causing the change in gut bacteria or if it is the other way round," adds Dr. Misra.

This novel study may help further in understanding how drugs alter the gut microbiome and if probiotics/prebiotics and nutritional supplements should be given along with certain prescribed drugs.

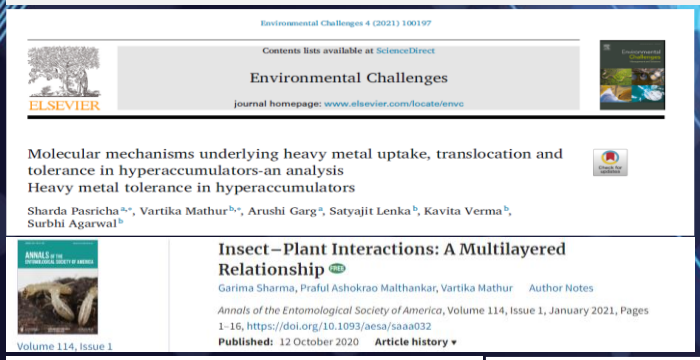
New angle: "Studies on gut microbiome are crucial since species upsurge may prove detrimental in infectious disease such as TB," says Richa Misra (seated).

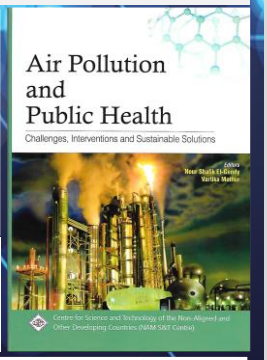
This Publication featured as Cover Illustration: 'Combating TB with Fellow Friends and Foes'. and covered in The Hindu newspaper

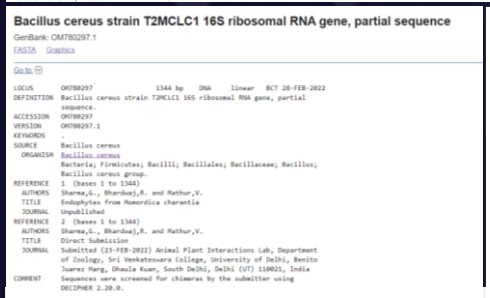
Animal-Plant Interactions Lab

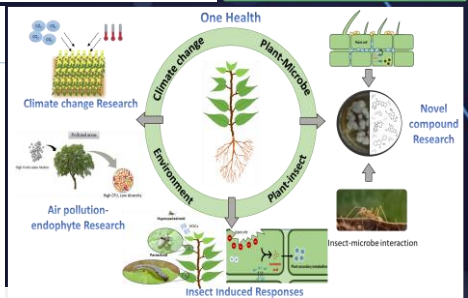
Prof. Vartika Mathur has been working in the Department of Zoology, Sri Venkateswara College, University of Delhi since 2006 and started the Animal-Plant Interactions lab in 2011. She has also developed a microbial culture facility which has a repository of more than 480 microbial symbionts isolated from various plants and animals. Her multidisciplinary research entails chemo-ecological and molecular aspect of intricate animal, plant and microbe interactions for their sustainable utilization in agriculture, environment and health sectors. The main focus of her lab is to search and work towards environmentally sustainable solutions related to 'One Health' of environment, plants, and ultimately humans. One of her recent research works indicated that alteration in air quality due to the induction of stress related chemicals affects the natural micro-environment of roadside flora, and thus in turn, affects the 'One Health' (published "Environmental Pollution"; IF 8.0). In the last year she has also isolated and reported 8 soil microbes and 4 endophytes in NCBI.

In 2021, she has developed climate simulation facility under major project funded by MoEF&CC in which impact of climate change on plant-animal-microbe interactions is being investigated. She has also signed an MoU with Czech University of Life Science, Czech Republic as well as Sadykov Institute of Bioorganic Chemistry of Academy of Science of the Republic of Uzbekistan. She fosters Industry-Acadmeia interconnect and has CSR project from IGL and Cadila. Last years she published 3 research papers, 1 book chapter and edited 1 book.









https://apilab.co.in/dr-Vartika-Mathur; https://en.wikipedia.org/wiki/Vartika_Mathur

Prof. Vartika Mathur

Professor,
Department of Zoology
Research experience
15 years
Teaching experience
18 years

Publications: 26

H-index: 8

Awards/Distinctions:

- Best Research Paper citation by Research Committee, Sri Venkateswara College for the year, 2019-2020
- Young scientist of the year 2015 award in the field of Chemical Ecology
- Only Indian to be awarded the Prestigious NUFFIC fellowship.

Team of Research Scholars

Abhishek Garg

I am working on the project titled "**Understanding the Role of Ser/Thr Protein Kinases in the regulation of Toxin-Antitoxin loci in *Mycobacterium tuberculosis*"** under the supervision of **Dr. Vandana Malhotra**

Shafinaz Rahman Sarah

My work focuses on understanding and deciphering the mechanisms of regulation of the Toxin-Antitoxin module in Mycobacterium Tuberculosis under the supervision of **Dr. Vandana Malhotra**. The work centres on elucidation of phosphorylation and its role on TA functioning.

Mansi Pandit

I am a research scholar at Bioinformatics Center, SVC under the supervision of **Prof. N. Latha**. My research focuses on immunoinformatics which involves computational methods to understand molecular basis of allergy. The work includes structure based characterisation and analysis of allergens and design and development of databases providing holistic information on different allergens.

पवन कुमार

हिंदी

स्वतंत्रतापूर्व स्त्री- लेखन में अभिव्यक्त स्त्री-प्रश्न' (विशेष संदर्भ सन् 1900 ई. से 1947 तक का स्त्री काव्य) प्रस्तावित शोध-विषय का चुनाव हिंदी साहित्य से गायब कर दिए गए उन प्रश्नों और उन लेखिकाओं पर नए संदर्भों के साथ शोध कार्य करने के लिए किया गया है। इस हेतु मैंने सन् 1900 ई. से लेकर 1947 ई. के मध्य काव्य लेखिकाओं को आधार बनाया है। इस दौर की दो महत्वपूर्ण काव्य लेखिकाओं (सुभद्रा कुमारी चौहान और महादेवी वर्मा) पर पहले कई महत्वपूर्ण शोध-कार्य हुए हैं लेकिन उस दौर की अन्य स्त्री काव्य लेखिकाओं के काव्य पर पर्याप्त मात्रा में शोध कार्य नहीं किये गये हैं। अत: इस विषय पर शोध कार्य करते समय मेरा लक्ष्य विवेच्य काल की स्त्री कवयित्रियों की तरफ लोगों का ध्यान हैं, जिनको न तो इतिहास में कहीं स्थान मिला है और उनकी रचनाएं वर्तमान समय में पाठक वर्ग के सामने हैं। जो अपने काव्य लेखन में अभिव्यक्त सामाजिक, सांस्कृतिक, राजनीतिक, साहित्यिक, आर्थिक और शिक्षा आदि प्रश्नों को उठाया हैं।

आदित्य चतुर्वेदी

हिंदी

शोध विषय- रामचरितमानस में चित्रित राम की छवि और लोकगीतों में चित्रित राम की छवि का तुलनात्मक अध्ययन

मेरे शोधकार्य का प्रमुख उद्देश्य रामकथा से संबंधित विभिन्न लोक प्रचलित किंवदंतियों, लोकोक्तियों, मुहावरों व लोकगीतों के स्वरूप का अध्ययन करना है। मेरे शोध का उद्देश्य उत्तर भारत में फील्ड वर्क करते हुए लोकगीतों के परंपरा से वाक़िफ होना भी है। रामकथाओं में रामचरितमानस का क्या स्थान है? लोकगीतों में रामकथा के रूप क्या हैं? उनमें किस तरह क्षेत्रीयता का प्रभाव पडा है? अन्य रामकथाओं में राम के किस रूप का वर्णन किया गया है? रामचरितमानस में राम के रूप और समाज में आम लोगों के मन में बसे राम के स्वरूप में क्या अंतर है? लोकगीतों की अवधारणा क्या है? जातीय संगीत, संस्कार गीत, बधाई गीत क्या है और इनमें रामकथा का क्या प्रभाव पडा है? अवध तथा मिथिला रामकथा की दृष्टि से प्रमुख स्थान है लेकिन यहां के लोकगीतों में भी रामकथा से संबंधित ढेरों किंवदंतियों है। इस विषय पर समग्र शोधकार्य नहीं हुआ है। भोजपुरी लोकगीतों को लेकर एक शोधकार्य अवश्य हुआ है लेकिन उसमें विभिन्न रामकथाओं का विश्लेषणात्मक अध्ययन नहीं हुआ है।

Saraswati Rawat

As a researcher, it becomes our responsibility to ensure that the compounds and chemicals that we use for research work is not be dangerous to the environment and living entities. Taking this into account, the title of my research is "**Synthesis and Characterisation of Eco-Friendly Alkaline Niobate-based composite piezoceramics**." under the supervision of **Prof. K. Chandramani Singh**. Piezoceramics are materials that generate electricity by applying mechanical pressure to their surfaces and vice versa. The electronic market is dominated by highly toxic lead-based piezoceramics due to their superior properties. In recent years, to replace lead based piezoceramics, research has been focused on niobate based piezoceramics due to their high temperature stability and moderate piezoelectric properties. My aim is to develop lead free-piezoceramics that will not be hazardous to the environment so that we can have a clean alternative source of energy for high-speed technology.

Sayali Gadre

I am working as a Junior Research Fellow under **Prof. Anant Pandey** in DST Funded Indo-Norway project entitled "**Nanodos: Synthesis of Nanophosphors and Spin trapping Nanocrystals as Energy independent dosimeters for radiotherapy beams**".

I have registered for a Ph.D. at University of Delhi in the Department of Physics & Astrophysics in the academic year 2021-22.

Ananya Bansal

Physics

I am enrolled as Junior Research Fellow in a Research Project entitled "**Synthesis of Nanophosphor Dosimeters for Ion Beams**", sponsored by Inter-University accelerator Centre (IUAC), New Delhi and supervised by **Prof. Anant Pandey**.

Area of my research is Radiation Dosimetry. I am currently working on a thermoluminescent dosimeter for Gamma and Carbon beams.

Zoology

Garima Sharma

Plants and their endophytes share a symbiotic interaction, involving metabolic and physiological co-dependence, which enables them to synthesize a plethora of bioactive compounds. These metabolites are not only effective therapeutic agents but also provide an exclusive breakthrough in novel compound research. I am pursuing my Ph.D. research on "**Evaluating Antioxidant and Anti-proliferative Activity Of Endophytes From Medicinal Plants Against Lung Cancer**" under the supervision of **Prof Vartika Mathur** since 2017. So far, I have authored 10 research articles in high impact journals (H-index: 4), 1 book chapter and 1 patent. During 2021 I published 1 paper and was selected as **one of the 21 participants** for the Workshop on Oral Communication in Science organized by European Molecular Biology Organization (EMBO) India Biosciences held 12th – 29th Feb 2021.

Sharma et al., (2021). Insect–Plant Interactions: A Multilayered Relationship. Annals of the Entomological Society of America, 114(1): 1-16 . DOI: 10.1093/aesa/saaa032 (IF: 2.099)

https://apilab.co.in/ms-garima-sharma

Kavita Verma

I am pursuing Ph.D. research on "**Effect of Phenanthrene and Fluoranthene on insect-plant-microbe interaction**" under the supervision of **Prof. Vartika Mathur** since November 2019. I qualified for June 2019 CSIR-JRF. My research focuses on the in-depth study of the impact of Polycyclic Aromatic Hydrocarbons (PAH) on insect-plant-microbe interactions. This study would provide a complete understanding of the ecological, morphological, and physiological impact of PAH on the environment. In 2021, I have authored 1 research paper and 2 book chapters. I have also attended and presented my work at National and International Conferences and attended Workshops.

https://apilab.co.in/ms-kavita-verma

Surbhi Agarwal

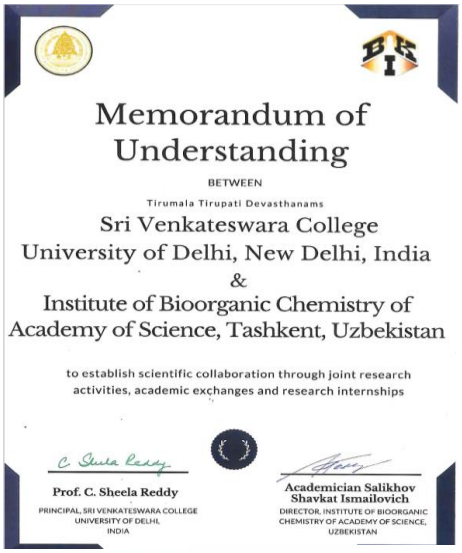
I am working as a Ph.D. scholar under **Prof. Vartika Mathur** at Sri Venkateswara College, University of Delhi since 2019. The title of my PhD thesis is "**Evaluation of Antioxidant, Anti-inflammatory and Anti-arthritic property in ant gut microbes through In vitro and In silico analysis**". Endosymbionts are the microbes that reside inside the body and tissues including the gut of the organisms. Insect-endosymbiont interaction is a diverse field of research. Ants being eusocial insect maintains mutualistic relationship with various plants and microbes. In last academic session I am currently evaluating ant endosymbionts possessing therapeutic potential. The bioactive compounds isolated from these microbes can be utilized in the process of future drug development research. During 2021 I have published 1 research paper and presented my work at an international conference.

https://apilab.co.in/ms-surbhi-agarwal

Registered Supervisors

Physics	• Prof. Anant Pandey • Prof. K. Chandramani Singh
Biochemistry	• Prof. N. Latha • Dr. Vandana Malhotra
Zoology	• Prof. Vartika Mathur
Chemistry	• Dr. R P Singh • Dr. Sanjay Kumar Batra
Tamil	• Prof. S. Seenivasan
Telugu	• Prof. S. Vivekananthan
Sociology	• Prof. Nabanipa Bhattacharjee
Hindi	• Dr. Ram Kishore Yadav • Dr. Chandra Mohan Rawat
Sanskrit	• Dr. Punita Sharma • Dr. Kanwar Singh
Physical Education	• Dr. Narendra Gaur
Commerce	• Dr. Shruti Mathur
Mathematics	• Prof. Swarn Singh
Statistics	• Prof. Veena Budhraja

Our MOUs



Memorandum of Understanding

BETWEEN

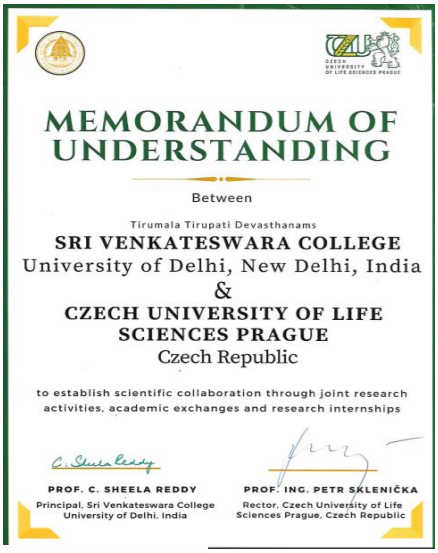
Tirumala Tirupati Devasthanams

Sri Venkateswara College
University of Delhi, New Delhi, India
&
Institute of Bioorganic Chemistry of Academy of Science, Tashkent, Uzbekistan

to establish scientific collaboration through joint research activities, academic exchanges and research internships

Prof. C. Sheela Reddy
PRINCIPAL, SRI VENKATESWARA COLLEGE UNIVERSITY OF DELHI, INDIA

Academician Salikhov Shavkat Ismailovich
DIRECTOR, INSTITUTE OF BIOORGANIC CHEMISTRY OF ACADEMY OF SCIENCE, UZBEKISTAN



MEMORANDUM OF UNDERSTANDING

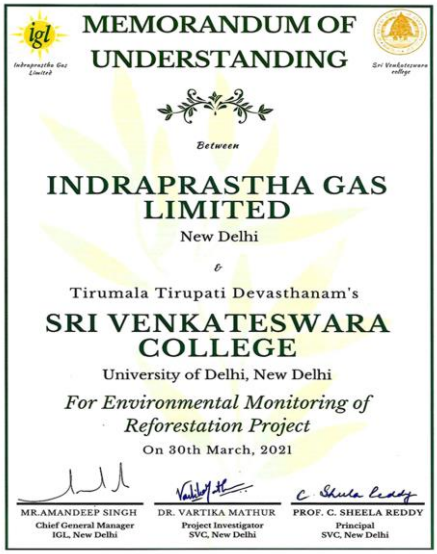
Between

Tirumala Tirupati Devasthanams
SRI VENKATESWARA COLLEGE
University of Delhi, New Delhi, India
&
CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE
Czech Republic

to establish scientific collaboration through joint research activities, academic exchanges and research internships

PROF. C. SHEELA REDDY
Principal, Sri Venkateswara College University of Delhi, India

PROF. ING. PETR SKLENIČKA
Rector, Czech University of Life Sciences Prague, Czech Republic



MEMORANDUM OF UNDERSTANDING

Between

INDRAPRASTHA GAS LIMITED
New Delhi

&

Tirumala Tirupati Devasthanam's
SRI VENKATESWARA COLLEGE
University of Delhi, New Delhi

For Environmental Monitoring of Reforestation Project

On 30th March, 2021

MR.AMANDEEP SINGH
Chief General Manager IGL, New Delhi

DR. VARTIKA MATHUR
Project Investigator SVC, New Delhi

PROF. C. SHEELA REDDY
Principal SVC, New Delhi

MEMORANDUM OF UNDERSTANDING

Between

ALL INDIA INSTITUTE OF MEDICAL SCIENCES
New Delhi

&

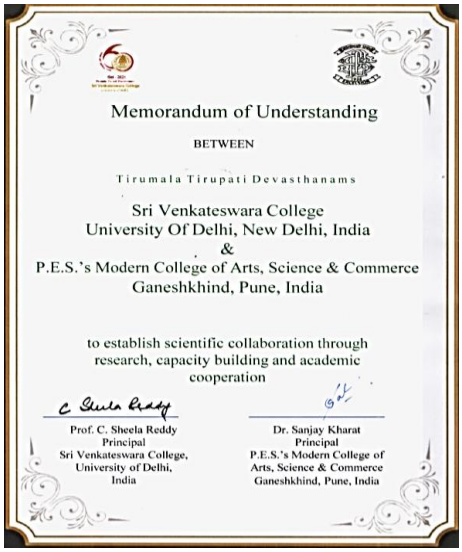
Tirumala Tirupati Devasthanam's
SRI VENKATESWARA COLLEGE
University of Delhi, New Delhi

For Environmental & Health Initiatives

On 30th September, 2020

DR. CHITRA SARKAR
Dean Research, AIIMS, New Delhi

DR. S. VENKATA KUMAR
Ag. Principal, SVC, New Delhi



Memorandum of Understanding

BETWEEN

Tirumala Tirupati Devasthanams

Sri Venkateswara College
University Of Delhi, New Delhi, India
&
P.E.S.'s Modern College of Arts, Science & Commerce
Ganeshkhind, Pune, India

to establish scientific collaboration through research, capacity building and academic cooperation

Prof. C. Sheela Reddy
Principal
Sri Venkateswara College, University of Delhi, India

Dr. Sanjay Kharat
Principal
P.E.S.'s Modern College of Arts, Science & Commerce
Ganeshkhind, Pune, India